PHILIPPINE BIDDING DOCUMENTS

Procurement of INFRASTRUCTURE PROJECTS

Government of the Republic of the Philippines

PROPOSED UPGRADING OF ELECTRICAL SYSTEM AND WATER SYSTEM AT STA. LUCIA SENIOR HIGH SCHOOL

Project number:
24-00063

Sixth Edition
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Preface

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

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

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

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

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

a. All the documents listed in the Table of Contents are normally required for the procurement of Infrastructure Projects. However, they should be adapted as necessary to the circumstances of the particular Project.

b. Specific details, such as the "*name of the Procuring Entity*" and "*address for bid submission*," should be furnished in the Instructions to Bidders, Bid Data Sheet, and Special Conditions of Contract. The final documents should contain neither blank spaces nor options.

c. This Preface and the footnotes or notes in italics included in the Invitation to Bid, BDS, General Conditions of Contract, Special Conditions of Contract, Specifications, Drawings, and Bill of Quantities are not part of the text of the final document, although they contain instructions that the Procuring Entity should strictly follow.

d. The cover should be modified as required to identify the Bidding Documents as to the names of the Project, Contract, and Procuring Entity, in addition to date of issue.

e. Modifications for specific Procurement Project details should be provided in the Special Conditions of Contract as amendments to the Conditions of Contract. For easy completion, whenever reference has to be made to specific clauses in the Bid Data Sheet or Special Conditions of Contract, these terms shall be printed in bold typeface on Sections I (Instructions to Bidders) and III (General Conditions of Contract), respectively.

f. For guidelines on the use of Bidding Forms and the procurement of Foreign-Assisted Projects, these will be covered by a separate issuance of the Government Procurement Policy Board.

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Glossary of Terms, Abbreviations, and Acronyms

ABC – Approved Budget for the Contract.

ARCC – Allowable Range of Contract Cost.

BAC – Bids and Awards Committee.

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

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

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

BIR – Bureau of Internal Revenue.

BSP – Bangko Sentral ng Pilipinas.

CDA – Cooperative Development Authority.

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

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

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

CPI – Consumer Price Index.

DOLE – Department of Labor and Employment.

DTI – Department of Trade and Industry.

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

GFI – Government Financial Institution.

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

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

GOP – Government of the Philippines.

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

LGUs – Local Government Units.

NFCC – Net Financial Contracting Capacity.

NGA – National Government Agency.

PCAB – Philippine Contractors Accreditation Board.

PhilGEPS - Philippine Government Electronic Procurement System.

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

PSA – Philippine Statistics Authority.

SEC – Securities and Exchange Commission.

SLCC – Single Largest Completed Contract.

UN – United Nations.

Section I. Invitation to Bid

Notes on the Invitation to Bid

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

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

a. The date of availability of the Bidding Documents, which shall be from the time the IB is first advertised/posted until the deadline for the submission and receipt of bids;

b. The place where the Bidding Documents may be acquired or the website where it may be downloaded;

c. The deadline for the submission and receipt of bids; and

d. Any important bid evaluation criteria.

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

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, **Quezon City Government** invites Bids for the **PROPOSED UPGRADING OF ELECTRICAL SYSTEM AND WATER SYSTEM AT STA. LUCIA SENIOR HIGH SCHOOL,** with Project Identification Number **24-00063.**

[Note: The Project Identification Number is assigned by the Procuring Entity based on its own coding scheme and is not the same as the PhilGEPS reference number, which is generated after the posting of the bid opportunity on the PhilGEPS website.]

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 **Ten Million Three Hundred Twenty-Seven Thousand Nine Hundred Sixty-Nine Pesos and 92/100 Ctvs. (P 10,327,969.92).**

2.2. The source of funding is:

a. LGUs, the Annual or Supplemental Budget, as approved by the Sanggunian.

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 not allowed.

7.1. *[If Procuring Entity has determined that subcontracting is allowed during the bidding , state:]* The Bidder must submit together with its Bid the documentary requirements of the subcontractor(s) complying with the eligibility 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. *[If subcontracting is allowed during the contract implementation stage, state:]* The Supplier may identify its subcontractor during the contract implementation stage. Subcontractors identified during the bidding may be changed during the implementation of this Contract. Subcontractors must submit the documentary

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

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

8. Pre-Bid Conference

The Procuring Entity will hold a pre-bid conference for this Project on the specified date and time and either at its physical address on **May 24, 2024 at 10:00 AM at 2nd Floor, Procurement Department-Bidding Room, Finance Building, Quezon City Hall Compound** and/or we encourage the prospective bidders to join through our **Virtual Conference (ZOOM APP) Meeting ID: 854 9489 0133 Password: 273320**

9. Clarification and Amendment of Bidding Documents

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

10. Documents Comprising the Bid: Eligibility and Technical Components

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

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

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

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

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

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

11. Documents Comprising the Bid: Financial Component

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

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

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

12. Alternative Bids

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

13. Bid Prices

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

14. Bid and Payment Currencies

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

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

a. Philippine Pesos.

15. Bid Security

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

15.2. The Bid and bid security **in no case shall exceed One Hundred Twenty (120) calendar days from the date of opening of bids, unless duly extended by the bidder upon the request of the Head of the Procuring Entity (HoPE) of the Quezon City Local Government**. Any bid not accompanied by an acceptable bid security shall be rejected by the Procuring Entity as non-responsive.

16. Sealing and Marking of Bids

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

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

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

17. Deadline for Submission of Bids

The Bidders shall submit on the specified date and time and either at its physical address or through online submission as indicated in paragraph **5** of the **IB.**

18. Opening and Preliminary Examination of Bids

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

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

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

19. Detailed Evaluation and Comparison of Bids

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

19.2. If the Project allows partial bids, all Bids and combinations of Bids as indicated in the **BDS** shall be received by the same deadline and opened and evaluated simultaneously so as to determine the Bid or combination of Bids offering the lowest calculated cost to the Procuring Entity. Bid Security as required by **ITB** Clause 15 shall be submitted for each contract (lot) separately.

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

20. Post Qualification

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

21. Signing of the Contract

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

Section III. Bid Data Sheet

Notes on the Bid Data Sheet (BDS)

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

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

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

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

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

Bid Data Sheet

ITB Clause	
5.2	For this purpose, similar contracts shall refer to contracts which have the same major categories of work.
7.1	**Subcontracting is not allowed.**
10.3	*No additional contractor license or permit is required* ***In addition, eligible bidders shall qualify or comply with the following:*** 1. Bidders with valid Philippine Contractors Accreditation Board (PCAB) Type **Building - Small B**
10.4	The minimum work experience requirements for key personnel are the following:

Qnty.	Key Personnel	General Experience	Relevant Experience
1	Project Manager	3 years	3 years
1	Project-In-Charge (Project Engineer)	3 years	3 years
1	General Foreman	3 years	3 years
1	Trade Engineers/Leadman for Civil Works	3 years	3 years
1	Trade Engineers/Leadman for Electrical Works	3 years	3 years
1	Safety Officer	3 years	3 years
1	DPWH duly accredited Materials/QA/QC Engineer	3 years	3 years
1	Cost Engineer/ Project Scheduler	3 years	3 years
1	Surveyor	3 years	3 years

In addition, the bidder must execute an affidavit of undertaking duly notarized stating that the foregoing personnel shall perform work exclusively for the project until its completion. Please see attached bid forms.

10.5	The minimum major equipment requirements are the following:

Equipment	Capacity	Number of Units
Dump Truck	12 cu. yard	1
Welding Machine	500amp	2
Grinder		1
One Bagger Mixer		1

In addition, the bidder must execute an affidavit of undertaking duly

	notarized stating that the foregoing equipment shall be used exclusively for the project until its completion. Please see attached bid forms.
12	*[Insert Value Engineering clause if allowed.]*
15.1	The bid security shall be in the form of a Bid Securing Declaration with project number, or any of the following forms and amounts: a) The amount of not less than Php **206,559.40** or equivalent to two percent (2%) of ABC if bid security is in cash, cashier's/manager's check, bank draft/guarantee or irrevocable letter of credit; or b) The amount of not less than Php **516,398.50** or equivalent to five percent (5%) of ABC if bid security is in Surety Bond.
19.2	**Partial bid is not allowed.** The infrastructure project is packaged in a single lot and the lot shall not be divided into sub-lots for the purpose of bidding, evaluation, and contract award.
20	No additional requirement.
21	**Additional Contract Documents relevant to the Project as required:** **1. Construction Schedule and S-curve,** **2. Manpower Schedule,** **3. Construction Methods,** **4. Equipment Utilization Schedule,** **5. PERT/CPM or other acceptable tools of project scheduling, shall be included in the submission of Technical Proposal.**

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

3.1 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.

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

4. The Contractor's Obligations

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

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

5. Performance Security

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

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

6. Site Investigation Reports

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

7. Warranty

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

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

8. Liability of the Contractor

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

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

9. Termination for Other Causes

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

10. Dayworks

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

11. Program of Work

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

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

12. Instructions, Inspections and Audits

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

13. Advance Payment

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

14. Progress Payments

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

15. Operating and Maintenance Manuals

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

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

Section V. Special Conditions of Contract

Notes on the Special Conditions of Contract

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

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

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

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

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

Special Conditions of Contract

GCC Clause	
2	Completion of work shall be within 120 calendar days.
4.1	The Procuring Entity shall give possession of all parts of the Site to the Contractor upon receipt of the Notice to Proceed.
6	The site investigation reports are: *[list here the required site investigation reports.]*
7.2	*[Select one, delete the other.]* *[In case of permanent structures, such as buildings of types 4 and 5 as classified under the National Building Code of the Philippines and other structures made of steel, iron, or concrete which comply with relevant structural codes (e.g., DPWH Standard Specifications), such as, but not limited to, steel/concrete bridges, flyovers, aircraft movement areas, ports, dams, tunnels, filtration and treatment plants, sewerage systems, power plants, transmission and communication towers, railway system, and other similar permanent structures:]* Fifteen (15) years. *[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. *[In case of other structures, such as bailey and wooden bridges, shallow wells, spring developments, and other similar structures:]* Two (2) years.
10	Dayworks are applicable at the rate shown in the Contractor's original Bid.
13	The amount of the advance payment is no more that fifteen percent (15%) of the Contract Price subject to approval by the HOPE and compliance with the conditions under RA 9184 and its IRR.
14	No further instructions.
15.1	The date by which operating and maintenance manuals are required is *thirty (30) days* The date by which "as built" drawings are required as part of final payment
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 ten (10%) percent of the contract price.

Section VI. Specifications

Notes on Specifications

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

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

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

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

Sample Clause: Equivalency of Standards and Codes

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

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

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

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PROJECT TITLE: **PROPOSED UPGRADING OF ELECTRICAL SYSTEM AND WATER SYSTEM AT STA. LUCIA SENIOR HIGH SCHOOL**

LOCATION: **BARANGAY STA. LUCIA, DISTRICT 5, QUEZON CITY**

TECHNICAL SPECIFICATIONS

I. GENERAL REQUIREMENTS

A. Comply with the current and existing laws, ordinances and applicable codes, rules and regulations, and standards. Any works performed contrary to the existing laws, rules and regulations, ordinances and standards without notice shall bear all cost arising therefrom.

B Drawings, specifications, codes and standards are minimum requirements. Where requirements differ the more stringent apply.

C Should there be any change(s) in drawings or specifications, it is required to comply with the governing regulations, notify the implementing agency

D. Photographs shall be taken as, when and where directed at intervals of not more than one month The photographs shall be sufficient in number and location, to record the exact progress of the works. The photographs shall be retained and will become the property of the Government.

E Site verification / inspection shall be conducted to validate the scope of works No extra compensation and extension of time shall be given due to negligence or inadvertence

F. The quality of materials shall be of the best grade of their respective kinds for the purpose The work shall also be performed in the best and most capable manner in strict accordance with requirements of the plans and details. All materials not conforming to the requirements of these specifications shall be considered as defective.

G. All equipment and installations shall meet or exceed minimum requirements of the standards and codes

H Mobilization and Demobilization (if applicable)

1. Mobilization shall include all activities and related costs for transportation of personnel, equipment, and operating supplies to the site; establishment of offices, buildings, and other necessary general facilities for the operations at the site.

2 Demobilization shall include all activities and costs for transportation of personnel, equipment, and supplies not anymore required within the construction site including the disassembly, removal and site clean-up of offices and other facilities assembled on the site specifically for this contract.

I Execute work in strict accordance with the best practices of the trades in a thorough, substantial, workmanlike manner by competent workmen Provide a competent experienced, full-time supervisor who is authorized to make decisions on behalf of the Contractor.

J Temporary Facilities and Utilities

1. All facilities shall be near the job site, where necessary and shall conform to the best standard for the required types

2. Temporary facilities shall be provided and maintained including sanitary facilities and first aid stations.

3. Temporary utilities shall be sufficiently provided until the completion of the project such as water, power and communication.

4 Temporary enclosure shall be provided around the construction site with adequate guard lights, railings and proper signage

5. Temporary roadways shall be constructed and maintained to sustain loads to be carried on them during the entire construction period.

6. Upon completion of the work, the temporary facilities shall be demolished, hauled-out and disposed properly.

K Adequate construction safety and health protection shall be provided at all times during the execution of work to both workers and property.

1 A fully-trained Medical Aide shall be employed permanently on the site who shall be engaged solely to medical duties.

2 The medical room shall be provided with waterproofing; it could be a building or room designated and used exclusively for the purpose and have a floor area of at least 15 square meters and a glazed window area of at least 2 square meters

3. The location of the medical room and any other arrangements shall be made known to all employees by posting on prominent locations and suitable notices in the site.

4. Additional safety precautions shall be provided in the event of a pandemic. Protocols set forth by the government shall be strictly followed

5. Construction safety shall consist of construction canopy and safety net

L. Necessary protections to the adjacent property shall be provided to avoid untoward incidents / accidents

M Final cleaning of the work shall be employed prior to the final inspection for the certification of final acceptance. Final cleaning shall be applied on each surface or unit of work and shall be of condition expected for a building cleaning and maintenance program.

II. SITE WORKS

A. All grades, lines, levels and dimensions shall be verified as indicated on the plans and details. Any discrepancies or inconsistencies shall be reported before commencing work.

B This item shall consist of the removal wholly or in part, and satisfactory disposal of all buildings, fences, structures, old pavements, abandoned pipe lines, and any other obstructions which are not designated or permitted to remain except for the obstructions to be removed and disposed of under other items in the Contract

Removal and/or demolition of existing structures shall be done in accordance to safety procedures.

C. All excavations shall be made to grade as indicated in the plans. Whenever water is encountered in the excavation process, it shall be removed by pumping, care being taken that the surrounding soil particles are not disturbed or removed.

The Contractor shall notify the Engineer sufficiently in advance of the beginning of any excavation so that cross-sectional elevations and measurements may be taken on the undisturbed ground. The natural ground adjacent to the structure shall not be disturbed without permission of the Engineer

Trenches or foundation pits for structures or structure footings shall be excavated to the lines and grades or elevations shown on the Plans or as staked by the Engineer. They shall be of sufficient size to permit the placing of structures or structure footings of the full width and length shown. The elevations of the bottoms of footings, as shown on the Plans, shall be considered as approximate only and the Engineer may order, in writing, such changes in dimensions or elevations of footings as may be deemed necessary, to secure a satisfactory foundation.

Boulders, logs, and other objectionable materials encountered in excavation shall be removed.

After each excavation is completed, the Contractor shall notify the Engineer to that effect and no footing, bedding material or pipe culvert shall be placed until the Engineer has approved the depth of excavation and the character of the foundation material.

D All excavated materials, so far as suitable, shall be utilized as backfill. The surplus materials shall be disposed of in such manner as not to obstruct the stream or otherwise impair the efficiency or appearance of the structure. No excavated materials shall be deposited at any time so as to endanger the partly finished structure.

All backfills shall be placed in layers not exceeding to 150mm in thickness and each layer shall be thoroughly compacted by wetting, tamping and rolling

E. Soil Poisoning. There are two methods usually adopted in soil poisoning which are as follows:

1. Cordoning. This method is usually adopted when there is no visible evidence of termite infestation. Trenches in concentric circles, squares or rectangles are dug 150mm to 220mm wide and at least one meter apart and applied with Liquid Termicide Concentrate working solution at the rate of 8 liters per linear meter.

2. Drenching. When soil show termite infestation, this method shall be applied. The building area shall be thoroughly drenched with Liquid Termicide Concentrate working solution at the rate of 24 liters per square meter

III. CIVIL / STRUCTURAL WORKS

A. CONCRETE WORKS

1. Delivery, Storage, and Handling: All materials shall be so delivered, stored and handled as to prevent the inclusion of foreign materials and the damage of materials by water or breakage. Package materials shall be delivered and stored in original packages until ready to be used. Packages or materials showing evidence of water or other damage shall be rejected

2 Unless otherwise specified herein, concrete works shall conform to the requirements of the ACI Building Code. Full cooperation shall be given on trades to install embedded items. Provisions shall be made for setting items not placed in the forms. Before concrete is placed, embedded items shall have been inspected and tested for concrete aggregates and other materials shall have been done

3 Materials

a Cement for concrete shall conform to the requirements of specifications for Portland Cement (ASTM C – 150)

b. Water used in mixing concrete shall be clean and free from other injurious amounts of oils, acids, alkaline, organic materials or other substances that may be deleterious to concrete or steel

c. Fine aggregates shall be beach or river sand conforming to ASTM C33, "Specification for Concrete Aggregates". Sand particle shall be course, sharp, clean free from salt, dust, loam, dirt and all foreign matters.

d Coarse aggregates shall be either natural gravel or crushed rock conforming to the "Specifications for Concrete Aggregates (ASTM C33). The minimum size of aggregates shall be larger than one fifth (1/5) of the narrowest dimensions between sides of the forms within which the concrete is to be cast nor larger than three fourths (3/4) of the minimum clear spacing between reinforcing bars or between reinforcing bars and forms.

4. Proportioning and Mixing

a. Proportioning and mixing of concrete shall conform to the requirements for Item 405 of the standard specification with the following proportions:

Cement Sand. Grave:
Class "A" - 1 2 3
Class "B" - 1. 2. 4
Class "C" - 1: 2 ½

b. Concrete mixture to be used for concrete shall conform with the structural requirements.

c Mixing – concrete shall be machine mixed. Mixing shall begin within 30 minutes after the cement has been added to the aggregates.

5. Forms

a. General – Forms shall be used whatever necessary to confine the concrete and shape it to the required lines, or to insure the concrete of contamination with materials caving from adjacent, excavated surfaces. Forms shall have sufficient strength to withstand the pressure resulting from placement and vibration of the concrete, and shall be maintained rigidly in correct position. Forms shall be sufficiently tight to prevent loss or mortar from the concrete. Forms shall be ¼" (6mm) thick ordinary plywood and form lumber.

b Cleaning of Forms – before placing the concrete, the contact surfaces of the formed hall be cleaned of encrustations of mortar, the grout or other foreign material.

c. Removal of Forms – forms shall be removed in a manner which will prevent damage to the concrete. Forms shall not be removed without approval Any repairs of surface imperfections shall be formed at once and airing shall be started as soon as the surface is sufficiently hard to permit it without further damage.

6. Placing Reinforcement:

Steel reinforcement shall be provided as indicated. together with all necessary tie wires. chairs. spacers supports and other devices necessary to install and secure the reinforcement properly. All reinforcement, when placed, shall be free from loose. flaky rust and scale, oil, grease, clay and other coating and foreign substances that would reduce or destroy its bond with concrete Reinforcement shall be placed accurately and secured in place by use of metal or concrete supports, spacers and ties. Such supports shall be used in such manner that they will not be exposed or contribute in any way. to the discoloration or deterioration of the concrete.

7. Conveying and Placing Concrete:

a Conveying – concrete shall be conveyed from mixer to forms as rapidly as applicable, by methods which will prevent segregation or loss of ingredients There will be no vertical drop greater than 1 5 meters except where suitable equipment is provided to prevent segregation and where specifically authorized.

b Placing – concrete shall be worked readily into the corners and angles of the forms and around all reinforcement and imbedded items without permitting the material to segregate, concrete shall be deposited as close as possible to its final position in the forms so that flow within the mass does not exceed two (2) meters and consequently segregation is reduced to a minimum near forms or embedded items or elsewhere as directed, the discharge shall be so controlled that the concrete may be effectively compacted into horizontal layers not exceeding 30 centimeters in depth within the maximum lateral movement specified

c Time interval between mixing and placing Concrete shall be placed before initial set has occurred and before it has contained its water content for more than 45 minutes. No concrete mix shall be placed before 60 complete revolution of the machine mixer

d. Consolidation of Concrete – concrete shall be consolidated with the aid of mechanical vibrating equipment and supplemented by the hand spading and tamping. Vibrators shall not be inserted into lower cursed that have commenced initial set, and reinforcement embedded in concepts beginning to set or already set shall not be disturbed by vibrators. Consolidation around major embedded parts shall by hand spading and tamping and vibrators shall not be used.

e Placing Concrete through reinforcement – In placing concrete through reinforcement, care shall be taken that no segregation of the coarse aggregate occurs. On the bottom of beams and slabs, where the congestion of steel near the forms makes placing difficult, a layer of mortar of the same cement-sand ratios as used in concrete shall be first deposited to cover the surfaces.

8. Curing

a General – All concrete shall be moist cured for a period not less than seven (7) consecutive days by an approved method or combination applicable to local conditions

b. Moist Curing – The surface of the concrete shall be kept continuously wet by covering with burlap plastic or other approved materials thoroughly saturated with water and keeping the covering spraying or intermittent hosing.

9. Finishing

a. Concrete surfaces shall not be plastered unless otherwise indicated. Exposed concrete surfaces shall be formed with plywood, and after removal of forms, the surfaces shall be smooth, true to line and shall present or finished appearance except for minor defects which can be easily repaired with patching with cement mortar, or can be grounded to a smooth surface to remove all joint marks of the form works.

b. Concrete Slabs on Fill. The concrete slabs on fill shall be laid on a prepared foundation consisting of sub grade and granular fill with thickness equal to the thickness of the overlaying slab except when indicated.

B. MASONRY WORKS

1. Masonry Units (Concrete Hollow Blocks):

a 100mm thick for all interior walls and 150mm thick for all exterior walls unless otherwise indicated.

b. Use 400 psi for non-load bearing blocks and 700 psi for load bearing blocks where required.

c. Where full height walls are constructed with concrete hollow blocks, these shall extend up to the bottom of beam or slab unless otherwise indicated on plans. Provide stiffener columns and lintel beams as specified in the structural drawings or as specified or as deemed required to assure a stabilized wall due to height and other considerations.

2. Sand

S-1, washed, clean and greenish in color

3. Mortar

One part Portland cement and two parts sand and water but not more than three parts sand and water.

4. Reinforcement

The concrete hollow blocks shall be reinforced with 10mm diameter deformed bar, spaced not more than 0.8m on centers, both ways

5 Plaster bond.

The mixture of cement plaster for concrete hollow block wall finishes indicated in the drawings shall be one part Portland cement and three parts sand.

6 Floor Topping Preparation for Tilework. One part Portland cement and two parts sand and water but not more than three parts sand and water

C. MOISTURE PROTECTION

1 WATERPROOFING

a Cementitious waterproofing powder mix shall be cement-based aggregate-type, heavy duty, waterproof coating for reinforced concrete surface and masonry exposed to water. Additive binders shall be of special formulation of acrylic polymers and modifiers in liquid form used as additive with cement-based powder mix that improves adhesion and mechanical properties. Water shall be clean, clear and potable

b. Concrete surface to be applied with waterproofing shall be structurally sound, clean and free of dirt, loose mortar particles, paint films, oil, protective coats, efflorescence, laitance, etc. All defects shall be properly corrected and carefully formed to provide a smooth surface that is free of marks and properly cured prior to application works

c. Furnish all labor, materials, equipment, plant and other facilities required to complete all waterproofing work as shown on the drawings and herein specified. All applications shall be strictly performed by an approved waterproofing Contractor

d. Test waterproofed area by seventy-two (72) hours and check for any seepages.

Note: Thickness should be as per Manufacturer's Specifications and Installation depending on the areas to be applied with.

2. VAPOR BARRIER

a. Vapor barrier shall be placement of 8mil Polyethylene sheet prior to pouring of concrete for foundation members, slabs-on-fill and slabs-on-grade.

IV. ARCHITECTURAL WORKS

A. FLOOR FINISHES

1 **Ceramic Tiles.** Unglazed ceramic tiles shall be hard, dense tiles of homogeneous composition. Its color and characteristics area determined by the materials used in the body, the method of manufacture and the thermal treatment.

Tile work shall not be started until roughing-ins for sanitary/plumbing, electrical and other trades have been completed and tested. The work of all other trades shall be protected from damage

2. **Cement Floor Finish.** Mortar topping shall be one part Portland cement and three parts fine aggregate by loose volume

Finish topping shall be pure Portland cement properly graded mixed with water to approved consistency and plasticity. Where required to be colored cement floor finish, red or green oxide powder shall be premixed with Portland cement complying with finish topping requirements and the desired color intensity. Cement floor finish floor hardener shall be premixed as required and applied in accordance with the manufacturer's instruction manual.

B. WALL FINISHES AND PARTITIONING

1. **Ceramic Tiles.** Glazed tiles and trims shall have an impervious face of ceramic materials fused onto the body of the tiles and trims. The glazed surface may be clear white or colored depending on the color scheme approved by the Engineer. Standard glazes may be bright (glossy), semi-matte (less glossy), matte (dull) or crystalline (mottled and textured; good resistance to abrasion).

   Tile work shall not be started until roughing-ins for sanitary/plumbing, electrical and other trades have been completed and tested. The work of all other trades shall be protected from damage.

2. **Cement Plaster Finish.** Mortar mixture for brown coat shall be freshly prepared and uniformly mixed in the proportion by volume of one part Portland cement, three (3) parts sand and one fourth (1/4) part hydrated lime.

   Finish coat shall be pure Portland cement properly graded conforming to the requirements and mixed with water to approved consistency and plasticity.

C. CEILING FINISHES

1. Slab Soffit.

D. CARPENTRY WORKS

Lumber of different species for the various parts of the structure shall be well-seasoned, sawn straight, sundried or kiln-dried and free from defects such as loose unsound knots, pitch pockets, sapwood, cracks and other imperfections impairing its strength, durability and appearance.

Rough lumber for framing and siding boards shall be air-dried or sundried such that its moisture content shall not exceed 22 percent. Dressed lumber for exterior and interior finishing, for doors and windows, millwork, cabinet work and flooring boards shall be kiln-dried and shall not have a moisture content in excess of 14 percent at the time of installation in the structure.

Plyboard shall be good grade and made of laminated wood strips of uniform width and thickness bounded together with water resistant resin glue. The laminated core shall be finished both faces with select grade Tanguile or red Lauan veneers not less than 2 mm thick similarly bonded to the core. The plyboard of not less than 19 mm thick shall be free from defects such as split in veneer, buckling or warping.

Plywood shall conform to the requirements of the Philippine Trade Standards 631-02. Thickness of a single layer laminae shall not be less than 2 mm. The laminae shall be superimposed in layers with grains crossing at right angles in successive layers to produce stiffness. The face veneers shall be rotary cut from select grade timber. The laminae and face veneers shall be bonded with water resistant resin glue, hot pressed and pressure treated. Ordinary Tanguile or red Lauan plywood with good quality face veneers, 6 mm thick shall be used for double walling and ceiling not exposed to moisture; waterproof or marine plywood shall be used for ceiling exposed to moisture such as at toilets and eaves, and ceiling to be finished with acrylex.

Glue shall be from water resistant resins which, upon hardening, shall not dissolve nor lose its bond or holding power even when soaked with water for extended period.

Nails, screw, bolts, and straps shall be provided and used where suitable for fixing carpentry and joinery works. All fasteners shall be brand new and adequate size to ensure rigidity of connections.

1. Nails of adequate size shall be steel wire, diamond-pointed, ribbed shank and blight finish

2. Screws of adequate size shall be aluminum or brass plated steel with slotted head

3. Lag screws of adequate size, for anchoring heavy timber framing in concrete or masonry, shall be galvanized steel

4 Bolts and nuts shall be of steel having a yield point of not less than 245 Mpa Bolts shall have square heads and provided with standard flat steel washers and hexagonal nuts. Threads shall conform to American coarse thread series. Threaded portion shall be long enough so that the nut can be tightened against the bolted members without any need for blocking. The bolt's threaded end shall be finished smooth for ease of engaging and turning the nut.

5. Wrought iron straps or angles, when required in conjunction with bolts or lag screws to provide proper anchorage, shall be of the shape and size shown on the Plans

E. PAINTING WORKS

1 Paint Materials. All types of paint material and other related products shall be subject to test as to material composition by the Bureau of Research and Standard, DPWH or the National Institute of Science and Technology.

2 Tinting Colors Tinting colors shall be first grade quality pigment ground in alkyd resin that disperses and mixes easily with paint to produce the color desired. Use the same brand of paint and tinting color to effect good paint body

3 Skim coat. Skim coat shall be fine powder type material like kalsomine that can be mixed into putty consistency with oil-based primers and paints to fill minor surface dents and imperfections

4 Paint Schedule

a Exterior Masonry Wall (plain cement plastered finish to be painted)

i. 1 coat skim coating, 1 coat primer, 2 coats elastomeric paint finish

b. Interior Masonry Wall (plain cement plastered finish to be painted)

i. 1 coat skim coating, 1 coat primer, 2 coats latex paint finish

c. Interior Dry Wall

i 1 coat primer, 2 coats latex paint finish

d. Ceiling Boards

i. 1 coat primer, 2 coats latex paint finish

e. Slab Soffit

i 1 coat primer, 2 coats latex paint finish

f. Metal / Steel Surfaces

i. 1 coat primer, 2 coats epoxy enamel finish

5. Surface Preparation All surfaces shall be in proper condition to receive the finish Woodworks shall be hand-sanded smooth and dusted clear. All knot-holes pitch pockets or sappy portions shall be sealed with natural wood filler Nail holes, cracks or defects shall be carefully puttied after the first coat, matching the color of paint

Interior woodworks shall be sandpapered between coats. Cracks, holes of imperfections in plaster shall be filled with patching compound and smoothed off to match adjoining surfaces

Concrete and masonry surfaces shall be coated with concrete neutralizer and allowed to dry before any painting primer coat is applied. When surface is dried apply first coating. Hairline cracks and unevenness shall be patched and sealed with approved putty or patching compound. After all defects are corrected apply the finish coats as specified on the Plans (color scheme approved).

Metal shall be clean, dry and free from mill scale and rust. Remove all grease and oil from surfaces. Wash, unprimed galvanized metal with etching solution and allow it to dry. Where required to prime coat surface with Red Lead Primer same shall be approved by the Engineer.

In addition, the Contractor shall undertake the following:

a. Voids, cracks, nick etc. will be repaired with proper patching material and finished flushed with surrounding surfaces.

b. Marred or damaged shop coats on metal shall be spot primed with appropriate metal primer.

c. Panting and varnishing works shall not be commenced when it is too hot or cold.

d Allow appropriate ventilation during application and drying period

e All hardware will be fitted and removed or protected prior to painting and varnishing works.

5 Application. Paints when applied by brush shall become non-fluid, thick enough to lay down as adequate film of wet paint. Brush marks shall have flawed out after application of paint

Paints made for application by roller must be similar to brushing paint. It must be non-sticky when thinned to spraying viscosity so that it will break up easily into droplets

Paint is atomized by high pressure pumping rather than broken up by the large volume of air mixed with it. This procedure changes the required properties of the paint.

7. Application shall be as per paint Manufacturer's specification and recommendation.

8 Provide all drop cloth and other covering requisite for protection of floors, walls, aluminum, glass, finishes and other works.

9 All applications and methods used shall strictly follow the Manufacturer's Instructions and Specifications.

10 All surfaces including masonry wall shall be thoroughly cleaned, puttied, sandpapered, rubbed and polished; masonry wall shall be treated with Neutralizer

11 All exposed finish hardware, lighting fixtures and accessories, glass and the like shall be adequately protected so that these are not stained with paint and other painting materials prior to painting works

12 All other surfaces endangered by stains and paint marks should be taped and covered with craft paper.

V. SANITARY / PLUMBING WORKS

A. Comply with the current applicable codes, ordinances, and regulations of the authority or authorities having jurisdiction, the rules, regulations and requirements of the utility companies (as applicable).

B Supply, installation and testing of the following.

1. Potable water supply system complete in all respects including but not limited to submittals, shop drawings, piping, water meters, valves, bibbs, insulation, all accessories required for complete and operational of the system.

2. Water service connections including but not limited to water meters, float valves. Any and all other works involve in providing the complete operation of the water supply system

3. Soil waste and vent system complete in all respect including but not limited to connection to existing sewer, submittals, shop drawings, pipes. fittings, valves. cleanout, drains, etc Complete and operational

4. Storm drainage system complete in all respect including but not limited to connection to existing storm drainage. submittals. shop drawings, pipes. fittings, valves. cleanout. drains. etc. Complete and operational.

C. Workmanship and installation methods shall conform to the best modern practice Employ skilled tradesmen to perform work under the direct supervision of fully qualified personnel

D All equipment and installations shall meet or exceed minimum requirements of the Standards and Codes as specified in plans and program of work.

E. Install equipmem in strict accordance with manufacturers written recommendations.

F. Physical sizes of all plant and equipment are to be suitable for the space allocated for the accommodation of such plant and equipment, taking into account the requirement of access for maintenance purposes.

G. In selecting makes and types of equipment. the Contractor shall ascertain that facilities for proper maintenance, repair and replacement are provided.

H. Where the Contractor proposes to use an item of equipment other than that specified or detailed in the drawing. which requires any redesign of the system, drawings showing the layout of the equipment and such redesign as required therefore shall be prepared by the Contractor at his own expenses Where such approved deviation necessitates a different quantity and arrangement of materials and equipment's from that originally specified or indicated in the drawings the Contractor shall furnish and install any such additional materials and equipment's required by the system at no additional cost.

I Equipment catalogue and manufacturer's specifications must be submitted for examination and details shall be submitted for approval before any equipment is to be ordered.

J. This shall include all information necessary to ascertain the equipment comply with this specification and drawings. Data and sales catalogue of a general nature will not be accepted

K. All materials. equipment components and accessories shall be delivered to the Site in a new condition, properly packed and protected against damage or contamination or distortion, breakage or structural weakening due to handling. adverse weather or other circumstances and. as far as practicable, they shall be kept in the packing cases or under approved protective coverings until required for use.

L Any items suffering from damage during manufacture, or in transit or on site whilst in storage or during erection shall be rejected and replaced without extra cost

M. All sanitary fittings and pipework shall be cleaned after installation and keep them in a new condition.

N. All installed pipelines shall be flushed through with water, rodded when necessary to ensure clearance of debris.

O. Cleaning and flushing shall be carried out in sections as the installation becomes completed

P The Contractor shall carry out hydraulic test on the complete plumbing systems and the drainage system to show that it is functioning satisfactorily within the requirements of this Specification and local regulations.

Q. The Contractor shall provide suitable test pumps and arrange for a supply of water required in connection with testing of pipework The test pump shall be fitted with pressure gauges which shall be of suitable range for the pressure being applied.

R Hydraulic tests shall be carried out as the pipework is installed and shall be completed before chases in walls and ducts are closed. Also test shall be carried out prior to false ceilings and other finishes are installed.

S Testing apparatus shall be provided by the Contractor. Where any section of pipework or equipment is unable to withstand the maximum pipework test pressure, it shall be isolated during the pipework test then that section of pipework or equipment shall be re-tested at the appropriate test pressure.

T. The Sanitary Contractor must carry out any additional tests required by the end-user and/or approving agency

U. Drainage pipe shall be tested by filling the pipe with 3m. of water higher than the test section and wait for 15 min, then check for leakage at every joints.

V Testing of drainage systems shall be carried out in sections by dividing the system horizontally. Each section shall comprise pipework and fitting for three floors/storeys required for testing.

W. Drainage pressure pipe shall be hydraulic tested at minimum pressure 50 psi

X. Hangers and supports for plumbing piping and equipment shall withstand the effects of gravity loads and stresses within limits and under conditions indicated according to ASCE/SEI 7.

Y. Install hangers and supports to allow controlled thermal and seismic movement of piping systems, to permit freedom of movement between pipe anchors, and to facilitate action of expansion joints, expansion loops, expansion bends, and similar units.

Z. Install lateral bracing with pipe hangers and supports to prevent swaying

AA. Install building attachments within concrete slabs or attach to structural steel. Install additional attachments at concentrated loads, including valves, flanges, and strainers, NPS 2-1/2 (DN 65) and larger and at changes in direction of piping. Install concrete inserts before concrete is placed; fasten inserts to forms and install reinforcing bars through openings at top of inserts.

BB. Install hangers and supports so that piping live and dead loads and stresses from movement will not be transmitted to connected equipment

CC Install hangers and supports to provide indicated pipe slopes and to not exceed maximum pipe deflections allowed by ASME B31.9 for building services piping

VI. ELECTRICAL WORKS

A. CONDUITS, BOXES AND FITTINGS

1. This item shall consist of the furnishing and installation of the complete conduit work, consisting of electrical conduits; conduit boxes such as junction boxes, pull boxes, utility boxes, octagonal and square boxes; conduit fittings, such as couplings, locknuts and bushings and other electrical materials needed to complete the conduit roughing-in work of this project.

2. All materials shall be brand new and shall be of the approved type meeting all the requirements of the Philippine Electrical Code and bearing the Philippine Standard Agency (PSA) mark.

3 All works throughout shall be executed in the best practice in a workmanlike manner by qualified and experienced electricians under the immediate supervision of a duly licensed Electrical Engineer.

4. The work to be done under this division of specifications consists of the fabrication, furnishing, delivery and installation, complete in all details of the electrical work, at the subject premises and all work materials incidental to the proper completion of the installation, except those portions of the work which are expressly stated to be done

by other fields. All works shall be done in accordance with the rules and regulations and with the specifications.

5. All lighting fixtures and lamps are as specified and listed on lighting fixture schedule

6. All grounding system installation shall be executed in accordance with the approved plans. Grounding system shall include building perimeter ground wires, ground rods, clamps, connectors, ground wells and ground wire taps as shown in the approved design.

7 All auxiliary systems such as telephone and intercom system, time clock system, fire alarm system and public address/nurse's call/paging system installations shall be done in accordance with the approved design

8. Upon completion of the electrical construction work, the contractor + shall provide all test equipment and personnel and to submit written copies of all test results

9. The contractor shall guarantee the electrical installation are done and in accordance with the approved plans and specifications The contractor shall guarantee that the electrical systems are free from all grounds and from all defective workmanship and materials and will remain so for a period of one year from date and acceptance of works Any defect shall be remedied by the Contractor at his own expense.

B. WIRES AND WIRING DEVICES

1 This item shall consist of the furnishing and installation of all wires and wiring devices consisting of electric wires and cables wall switches, convenience receptacles, heavy duty receptacles and other devices shown on the approved Plans but not mentioned in these specifications

2. Wires and cables shall be of the approved type meeting all the requirements of the Philippine Electrical Code and bearing the Philippine Standard Agency (PSA) mark. Unless specified or indicated otherwise all power and lighting conductors shall be insulated for 600 volts. All wires shall be copper, soft drawn and annealed, smooth and of cylindrical form and shall be centrally located inside the insulation.

3. Conductors or wires shall not be drawn in conduits until after the cement plaster is dry and the conduits are thoroughly cleaned and free from dirt and moisture. In drawing wires into conduits, sufficient slack shall be allowed to permit easy connections for fixtures, switches, receptacles and other wiring devices without the use of additional splices.

4. All conductors of convenience outlets and lighting branch circuit homeruns shall be wired with a minimum of 3 5 mm in size Circuit homeruns to panelboards shall not be smaller than 3 5 mm but all homeruns to panelboard more than 30 meters shall not be smaller than 5 5 mm. No conductor shall be less than 2 mm in size.

5. All wires of 14mm and larger in size shall be connected to panels and apparatus by means of approved type lugs or connectors of the solderless type sufficiently large enough to enclose all strands of the conductors and securely fastened They shall not loosen under vibration or normal strain.

6. All joints, taps and splices on wires larger than 14 mm shall be made of suitable solderless connectors of the approved type and size They shall be taped with rubber and PVC tapes providing insulation not less than that of the conductors.

7 No splices or joints shall be permitted in either feeder or branch conductors except within outlet boxes or accessible junction boxes or pull boxes. All joints in branch circuit wiring shall be made mechanically and electrically secured by approved splicing devices and taped with rubber and PVC tapes in a manner which will make their insulation as that of the conductor

8. All wall switches and receptacles shall be fitted with standard Bakelite face plate covers. Device plates for flush mounting shall be installed with all four edges in continuous contact with finished wall surfaces without the use of coiled wire or similar devices. Plaster filling shall not be permitted. Plates installed in wet locations shall be gasketed

9. When more than one switch or device is indicated in a single location, gang plate shall be used.

C. POWER LOAD CENTER, SWITCHGEAR AND PANELBOARDS

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

2. All materials shall be brand new and shall be of the approved type meeting all the requirements of the Philippine Electrical Code and bearing the Philippine Standard Agency (PSA) mark.

3. 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, dead front and shall consist of the following coordinated component parts:

   a. High Voltage Primary Section. High voltage primary incoming line section consisting of the following parts and related accessories:

      i. One (1) 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.

      ii. Three (3)-power fuses mounted in separate compartments within the switch housing and accessible by a hinged door.

      iii. One 1) set of high voltage potheads or 3-conductor cables or three single conductor cables.

      iv. Lightning arresters shall be installed at the high voltage cubicle if required.

      Items (i) and (ii) above could be substituted with a power circuit breaker with the correct rating and capacity.

   b. 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 1/2 % rated KVA taps on the primary winding in most cases one (1) above and three (3) below rated primary voltage and shall be changed by means of externally gang-operated manual tap changer only when the transformer is de-energized. Tap changing under load is acceptable if transformer has been so designed.

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

   c. Low Voltage Switchboard Section. The low-voltage switchboard shall be standard modular-unitized units, metal-built, dead front, safety type construction and shall consist of the following:

      i. Switchboard Housing. The housing shall be heavy gauge steel sheet, dead front type, gray enamel finish complete with frame supports, steel bracings, steel sheet panelboards, 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.

ii Secondary Metering Section. The secondary metering section shall consist of one (1) ammeter, AC, indicating type; one (1) voltmeter, AC, indicating type, one (1) ammeter transfer switch for 3-phase, one (1) voltmeter transfer switch for 3-phase; and current transformers of suitable rating and capacity

The above-mentioned instruments shall be installed in one compartment above the main breaker and shall be complete with all necessary accessories completely wired, ready for use

iii 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 approved Plans.

The main breaker shall include insulated control switch if electrically operated, manual trip button, magnetic tripping devices, adjustable time overcurrent protection and instantaneous short circuit trip and all necessary accessories to insure safe and efficient operation

iv Feeder Circuit Breakers. 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 drawout or molded case as required The circuit breakers shall each have sufficient interrupting capacity and shall be manualy 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 Plans.

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

d. 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 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.

e. 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 Plans The ground resistance shall not be more than 5 ohms.

f Panelboards and Cabinets. Panelboards shall conform to the schedule of panelboards as shown on the approved Plans with respect to supply characteristics, rating of main lugs or main circuit breaker, number and ratings and capacities of branch circuit breakers.

Panelboards 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 Panelboards shall be provided with directories and shall be printed to indicate load served by each circuit.

Panelboard cabinets and trims shall be suitable for the type of mounting shown on the approved Plans. The inside and outside of panelboard cabinets and trims shall be factory painted with one rust-proofing primer coat and two finish shop coats of pearl gray enamel
paint

Main and branch circuit breakers for panelboards shall have the rating, capacity and number of poles as shown on the approved Plans. Breakers shall be thermal magnetic type. Multiple breaker shall he 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

4. The Contractor shall install the Power Load Center Unit Substation or Low-Voltage Switchgear and Panelboards at the locations shown on the approved Plans.

   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.

D. Comply with the current applicable codes, ordinances, and regulations of the authority or authorities having jurisdiction, the rules, regulations and requirements of the utility companies (as applicable)

E. Drawings, specifications codes and standards are minimum requirements. Where requirements differ, the more stringent apply

F. All equipment and installations shall meet or exceed minimum requirements of the Standards and Codes.

G. Execute work in strict accordance with the best practices of the trades in a thorough, substantial workmanlike manner by competent workmen.

H. When the tests and inspections have been completed, a label shall be attached to all devices tested. The label shall provide the name of the testing company, the date the tests were completed, and the initials of the person who performed the tests

I. PANELBOARDS

   1. Fabricate and test panelboards according to IEEE 344 to withstand seismic forces defined in Division 16 Sections 16073 and 16074 "Hangers and Supports for Electrical Systems and Vibration and Seismic controls for Electrical Systems" respectively.

   2. Enclosures: Flush, Surface, Flush- and surface-mounted cabinets.

      a. Rated for environmental conditions at installed location.

         i. Indoor Dry and Clean Locations: NEMA, Type 1

         ii. Outdoor Locations: NEMA, Type 3R

         iii. Kitchen and Wash-Down Areas: NEMA, Type 4X, stainless steel

         iv. Indoor Locations Subject to Dust, Falling Dirt, and Dripping Noncorrosive Liquids: NEMA, Type 12

         v. Outdoor Locations Subject to Dust, Falling Dirt, and Dripping Noncorrosive Liquids: NEMA, Type 5R.

      b. Front: Secured to box with concealed trim clamps. For surface-mounted fronts, match box dimensions; for flush-mounted fronts, overlap box.

      c. Hinged Front Cover: Entire front trim hinged to box and with standard door within hinged trim cover.

      d. Skirt for Surface-Mounted Panelboards: Same gauge and finish as panelboard front with flanges for attachment to panelboard, wall, and ceiling or floor.

      e. Gutter Extension and Barrier: Same gage and finish as panelboard enclosure; integral with enclosure body. Arrange to isolate individual panel sections

      f. Finishes:

i. Panels and Trim: Steel and galvanized steel, factory finished immediately after cleaning and pretreating with manufacturer's standard two-coat baked-on finish consisting of prime coat and thermosetting topcoat.

ii Back Boxes: Galvanized steel Same finish as panels and trim.

iii. Fungus Proofing: Permanent fungicidal treatment for overcurrent protective devices and other components

g. Directory Card: Inside panelboard door, mounted in transparent card holder metal frame with transparent protective cover

3 Incoming Mains Location Top or Bottom.

4. Phase, Neutral, and Ground Buses:

a. Material: Hard-drawn copper, 98 percent conductivity.

b Equipment Ground Bus: Adequate for feeder and branch-circuit equipment grounding conductors; bonded to box

c Neutral Bus: 100 percent of phase bus 4, Extra-Capacity Neutral Bus: Neutral bus rated 200 percent of phase bus and UL listed as suitable for nonlinear loads.

1. parts of the structure and equipment damaged by the Contractor in the prosecution of the work shall be replaced as shown on the Plans

ENGR. KELVIN M. MARZONIA
E.E Planning and Programming Division

ENGR. RALPHGREGOR M. MANALO
C.E. Planning and Programming Division

Section VII. Drawings

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

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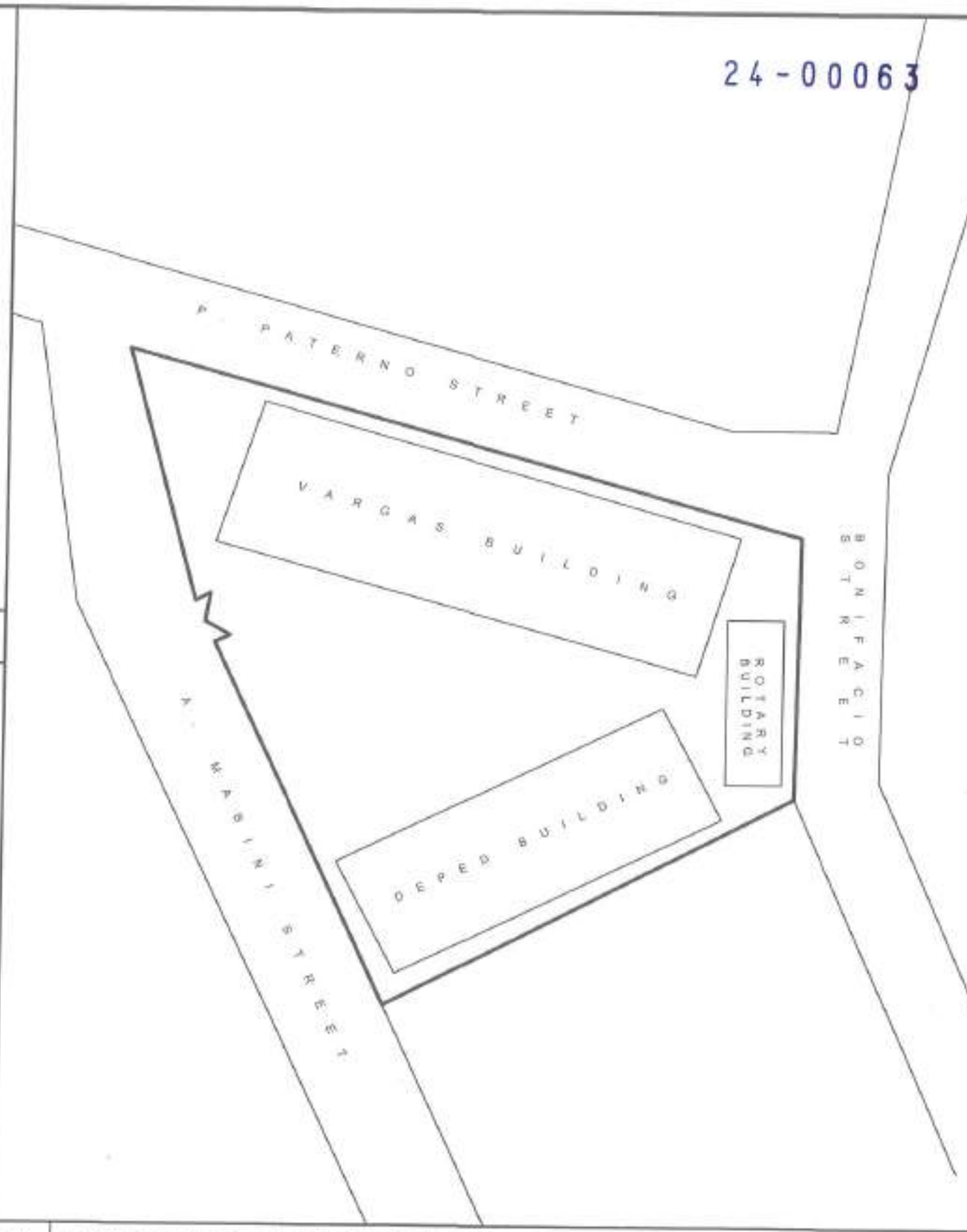
SITE

1 **VICINITY MAP** SCALE NTS.

SITE

2 **LOCATION MAP**



3 **SITE DEVELOPMENT PLAN**

TABLE OF CONTENT

Republika ng Pilipinas
Lungsod ng Quezon
DEPARTMENT OF ENGINEERING

PROJECT TITLE:
PROPOSED UPGRADING OF ELECTRICAL SYSTEM AND WATER SYSTEM AT STA.LUCIA SENIOR HIGH SCHOOL

LOCATION:
BARANGAY STA.LUCIA, DISTRICT V, QUEZON CITY

DATE:
DESIGNED BY:
DRAWN BY: VAV
CHECKED BY:
REVISION NO.:

SUBMITTED BY:
ENGR. FREDISWINDA OL. DE GUZMAN
HEAD, PLANNING & DESIGN DIVISION

RECOMMENDING APPROVAL:
ATTY. MARK DALE DIAMOND P. PERRAL
CITY ENGINEER, QUEZON CITY

APPROVED BY:
HON. MA. JOSEFINA G. BELMONTE
CITY MAYOR

SHEET CONTENT:
VICINITY MAP
LOCATION MAP
SITE DEVELOPMENT PLAN

SHEET NO.
AR-01
1 29

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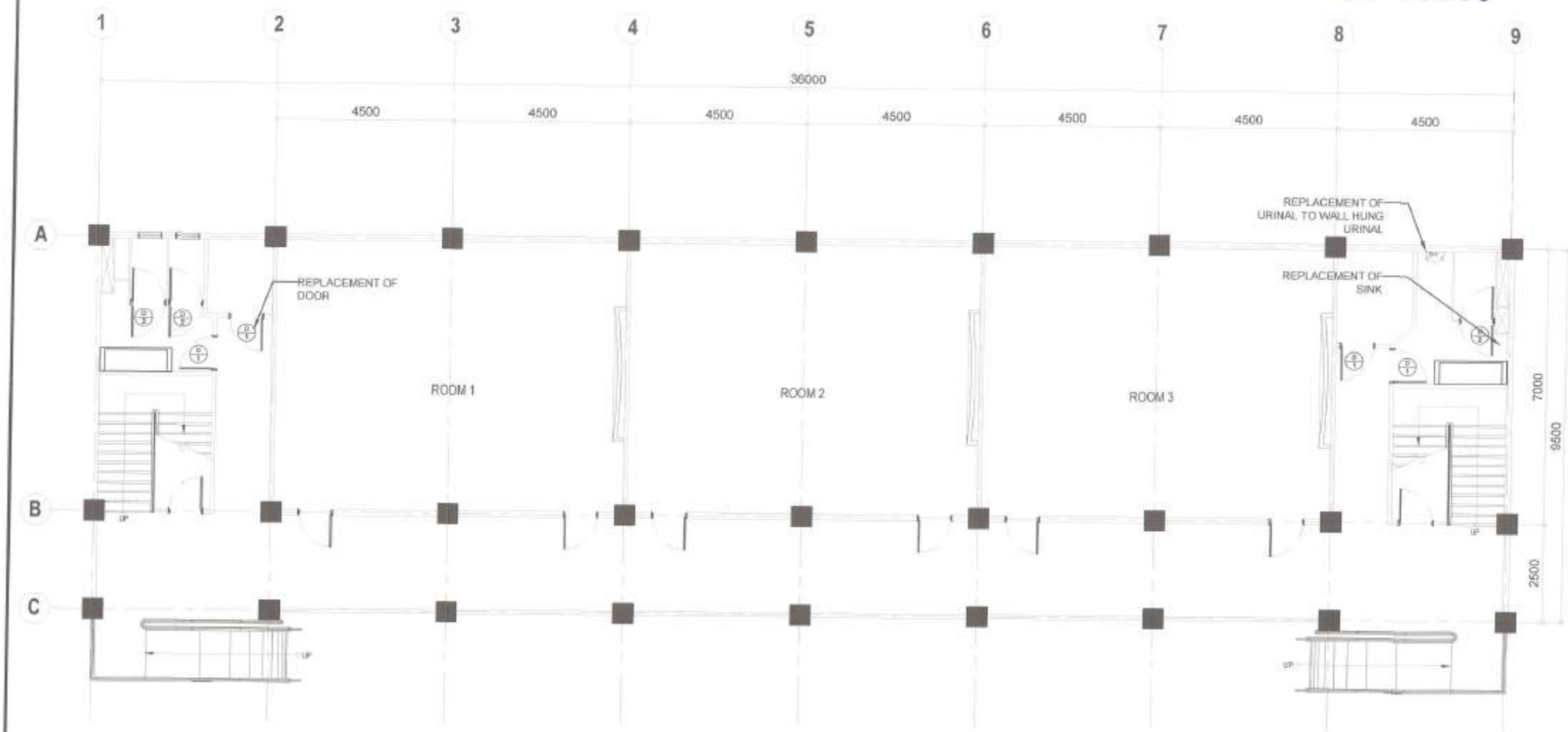

NOTE:

- REPLACEMENT OF FLOOR AND WALL TILES
- REPAINTING OF INTERIOR WALLS
- REPLACEMENT OF DOORS AND WINDOWS

LEGENDS:

D1= 0.90m x 2.10m
D2=0.6m x 1.2m

1 VARGAS BUILDING (GROUND FLOOR PLAN)

SCALE: 1:100 MTS

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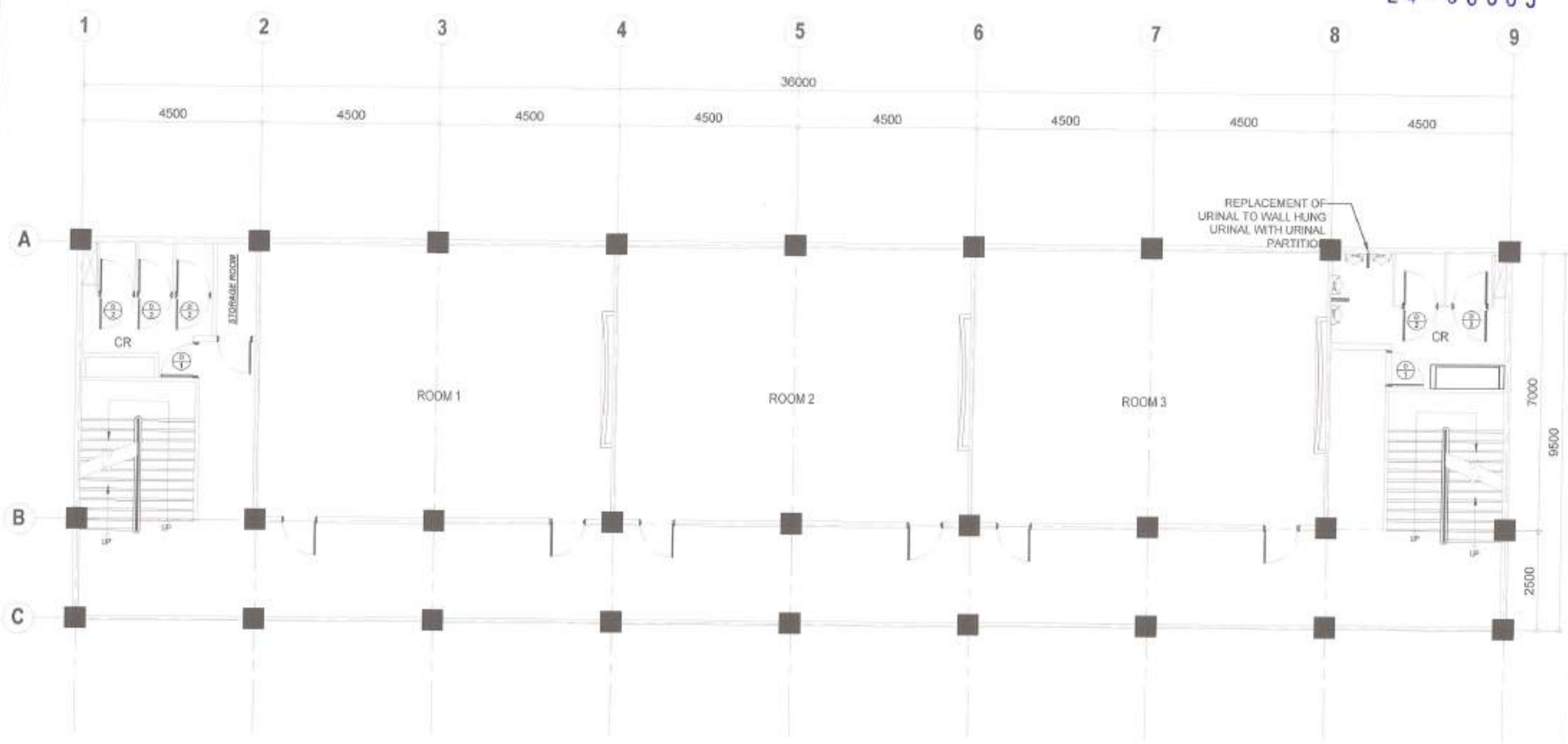
PROJECT TITLE: PROPOSED UPGRADING OF ELECTRICAL SYSTEM AND WATER SYSTEM AT STA.LUCIA SENIOR HIGH SCHOOL	DATE:	SUBMITTED BY:	RECOMMENDING APPROVAL:	APPROVED BY:	SHEET CONTENT	SHEET NO.
LOCATION: BARANGAY STA.LUCIA, DISTRICT V, QUEZON CITY	DESIGNED BY: / DRAWN BY: VAV / CHECKED BY:	ENGR. FREDISWINDO L. DE GUZMAN, HEAD, PLANNING & DESIGN DIVISION	ATTY. MARK DALE DIAMOND P. PERRAL, CITY ENGINEER, QUEZON CITY	HON. MA. JOSEFINA G. BELMONTE, CITY MAYOR	VARGAS BUILDING GROUND FLOOR PLAN	AR-02 2 29
	REVISION NO.:					

24-00063



NOTE:

- REPLACEMENT OF FLOOR AND WALL TILES
- REPAINTING OF INTERIOR WALLS
- APPLICATION OF WATERPROOFING
- REPLACEMENT OF DOOR

LEGENDS:

D1= 0.90m x 2.10m
D2=0.6m x 1.2m

1 VARGAS BUILDING (TYPICAL SECOND TO FOURTH FLOOR PLAN)

SCALE: 1:100 MTS

Republika ng Pilipinas
Lungsod ng Quezon
DEPARTMENT OF ENGINEERING

PROJECT TITLE: PROPOSED UPGRADING OF ELECTRICAL SYSTEM AND WATER SYSTEM AT STA.LUCIA SENIOR HIGH SCHOOL LOCATION: BARANGAY STA.LUCIA, DISTRICT V, QUEZON CITY	DATE: DESIGNED BY: DRAWN BY: TAV CHECKED BY: RCA REVISION NO.:	SUBMITTED BY: ENGR. FREDISENTH DL. DE GUZMAN HEAD, PLANNING & DESIGN DIVISION	RECOMMENDING APPROVAL: ATTY. MARK DALE DIAMOND P. PERRAL CITY ENGINEER, QUEZON CITY	APPROVED BY: HON. MA. JOSEFINA G. BELMONTE CITY MAYOR	SHEET CONTENT: VARGAS BUILDING -TYPICAL SECOND, THIRD AND FOURTH FLOOR PLAN	SHEET NO.: AR-03 3 29

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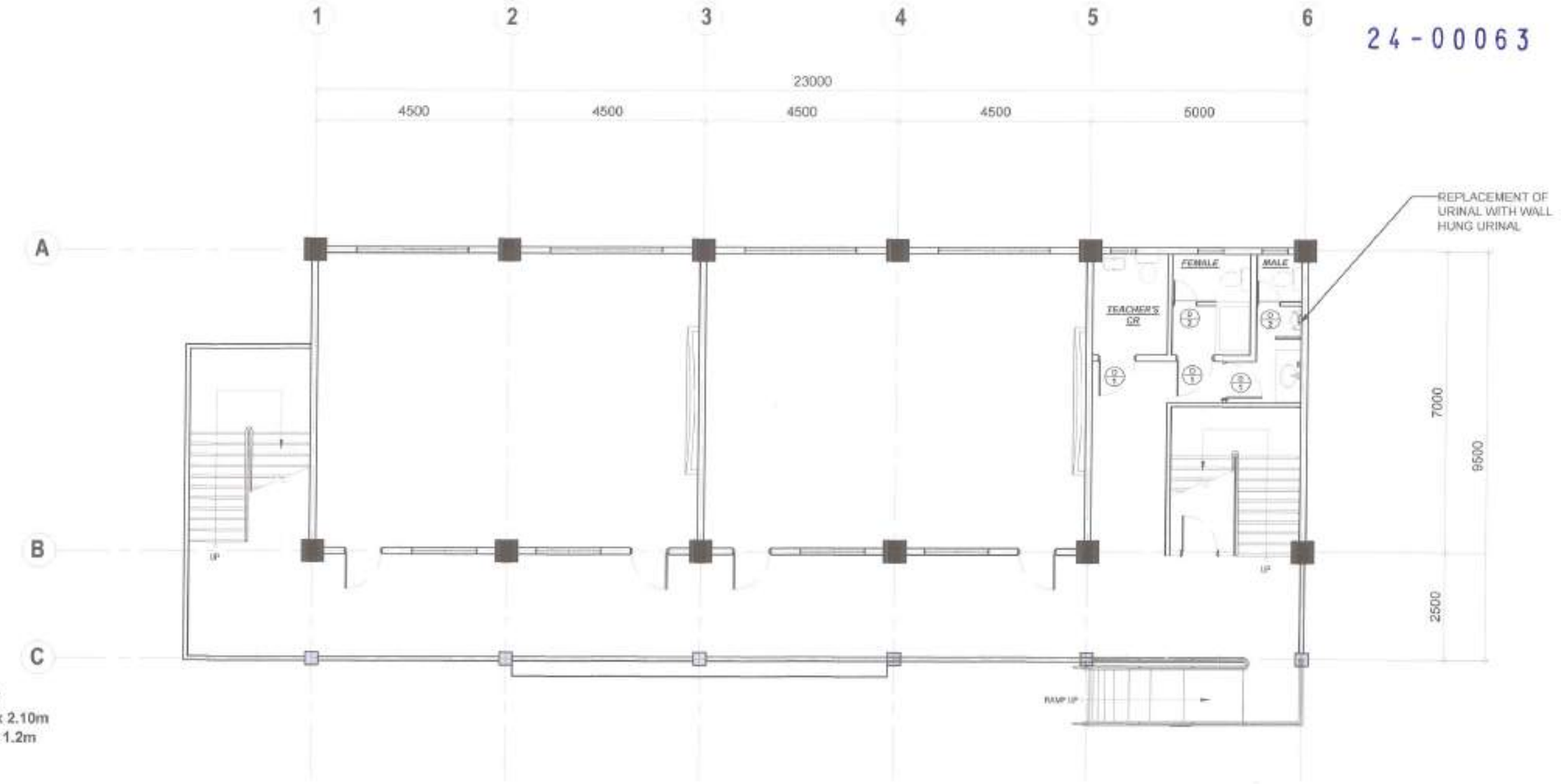

LEGENDS:

D1= 0.90m x 2.10m
D2 = 0.6m x 1.2m

NOTE:

- REPLACEMENT OF WALL AND FLOOR TILES
- INSTALLATION OF WALL HANG URINAL
- REPLACEMENT OF DOOR
- REPAINTING OF INTERIOR WALL

1 DEPED BUILDING (GROUND FLOOR PLAN)

SCALE: 1:100 MTS

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PROJECT TITLE: PROPOSED UPGRADING OF ELECTRICAL SYSTEM AND WATER SYSTEM AT STA.LUCIA SENIOR HIGH SCHOOL LOCATION: BARANGAY STA.LUCIA, DISTRICT V, QUEZON CITY	DATE: DESIGNED BY: DRAWN BY: YAV CHECKED BY: RGN REVISION NO.:	SUBMITTED BY: ENGR. FREDISWINDA DL. DE GUZMAN HEAD , PLANNING & DESIGN DIVISION	RECOMMENDING APPROVAL: ATTY. MARK DALE DIAMOND P. PERRAL CITY ENGINEER, QUEZON CITY	APPROVED BY: HON. MA. JOSEFINA G. BELMONTE CITY MAYOR	SHEET CONTENT: DEPED BUILDING -GROUND FLOOR PLAN	SHEET NO.: AR-04 4 29

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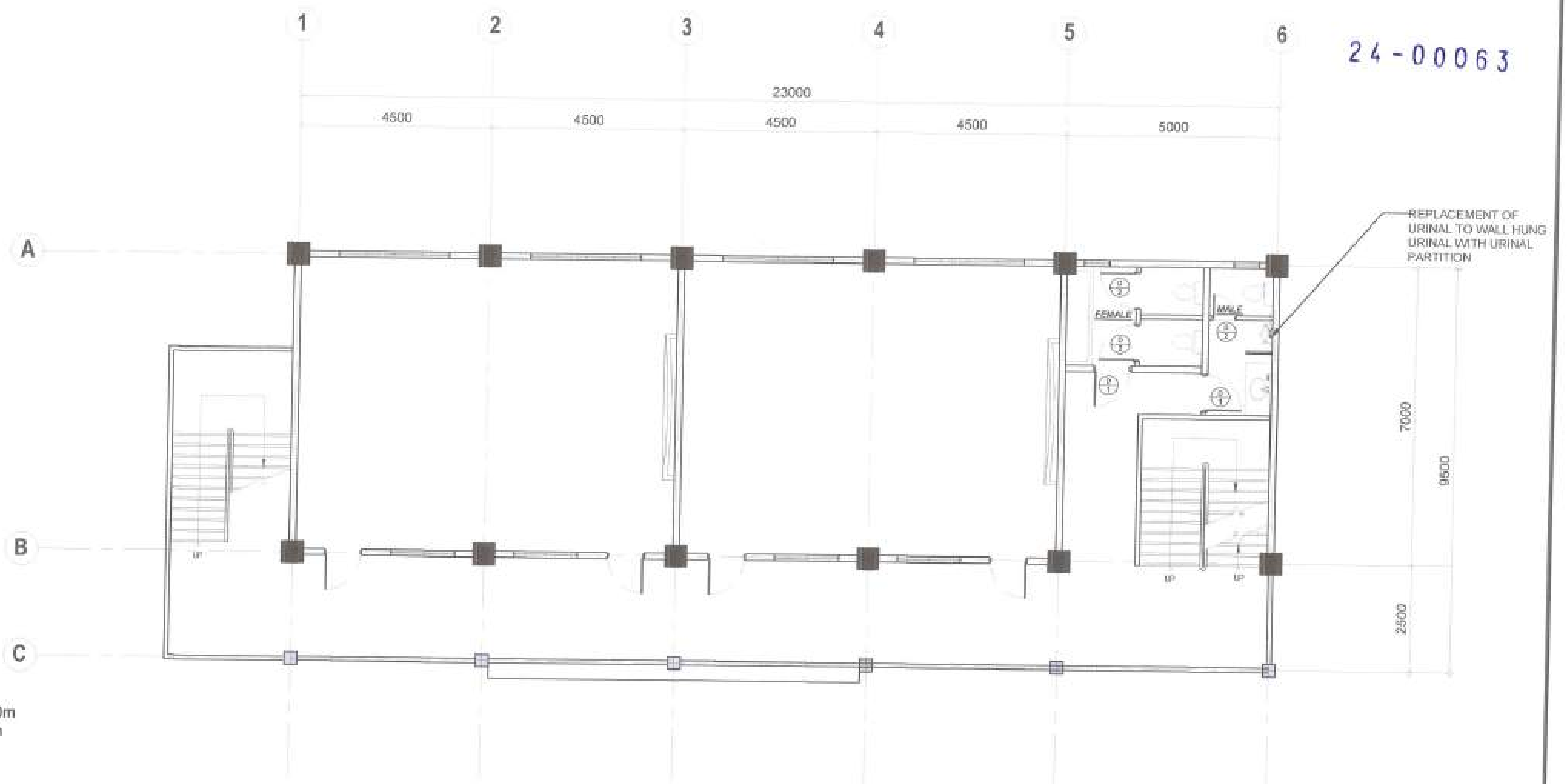

LEGENDS:

D1= 0.90m x 2.10m
D2 = 0.6m x 1.2m

NOTE:

- REPLACEMENT OF WALL AND FLOOR TILES
- REPLACEMENT OF DOOR
- REPLACEMENT OF CEILING
- REPAINTING OF INTERIOR WALL
- APPLICATION OF WATERPROOFING

1 DEPED BUILDING (TYPICAL SECOND TO FOURTH FLOOR PLAN)

SCALE: 1:100 MTS

Republika ng Pilipinas
Lungsod ng Quezon
DEPARTMENT OF ENGINEERING

PROJECT TITLE:	DATE:	SUBMITTED BY:	RECOMMENDING APPROVAL:	APPROVED BY:	SHEET CONTENT	SHEET NO.
PROPOSED UPGRADING OF ELECTRICAL SYSTEM AND WATER SYSTEM AT STA.LUCIA SENIOR HIGH SCHOOL	DESIGNED BY: / DRAWN BY: VAV / CHECKED BY: RDN	ENGR. FREDISWINDA BL. DE GUZMAN HEAD, PLANNING & DESIGN DIVISION	ATTY. MARK DALE DIAMOND P. PERRAL CITY ENGINEER, QUEZON CITY	HON. MA. JOSEFINA G. BELMONTE CITY MAYOR	BUILDING 2 - SECONDD FLOOR PLAN	AR-05 5 29
LOCATION: BARANGAY STA.LUCIA, DISTRICT V, QUEZON CITY	REVISION NO.					

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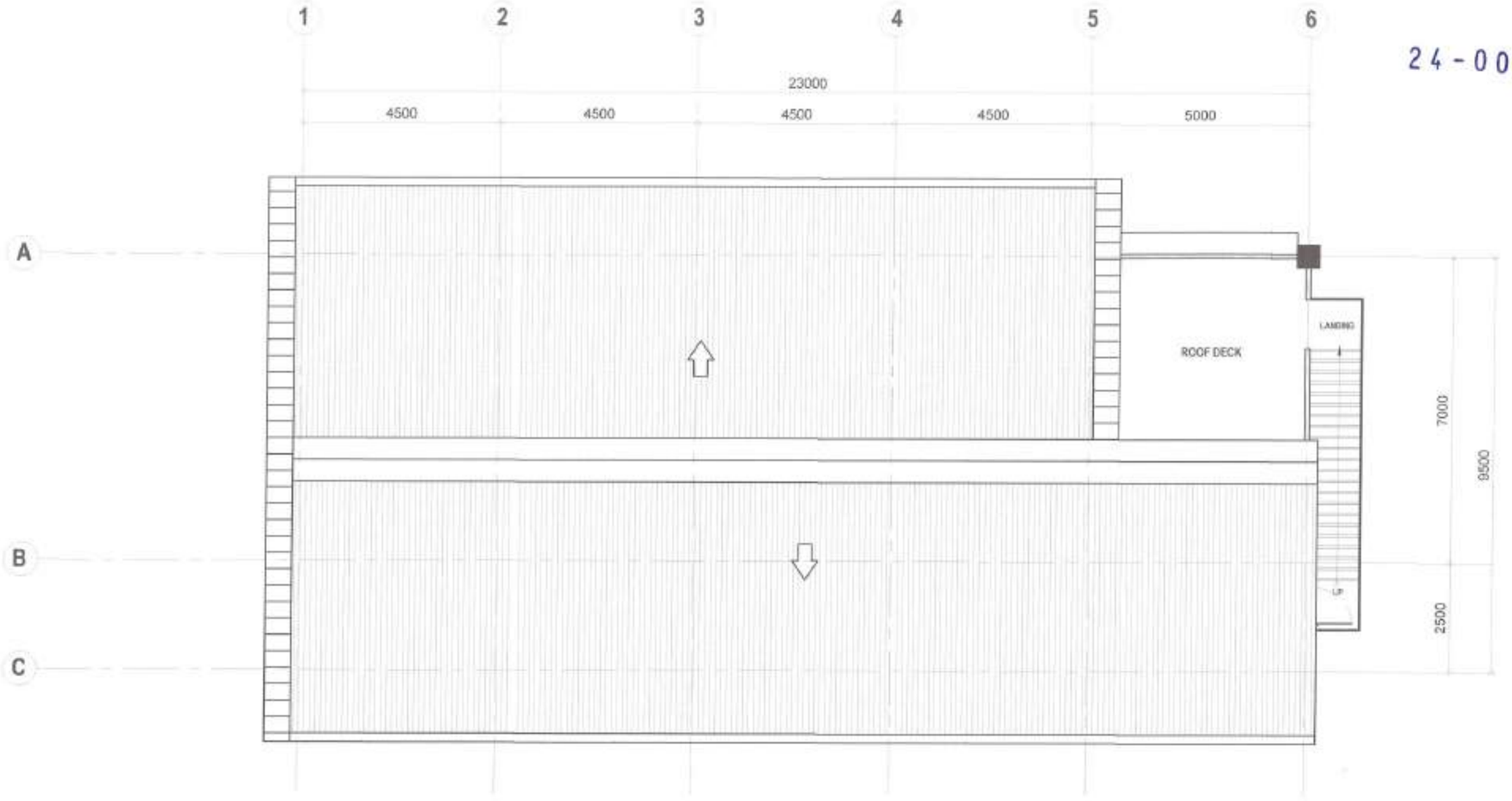

1 DEPED BUILDING (ROOF PLAN)

SCALE: 1:100 MTS

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PROJECT TITLE: PROPOSED UPGRADING OF ELECTRICAL SYSTEM AND WATER SYSTEM AT STA.LUCIA SENIOR HIGH SCHOOL LOCATION: BARANGAY STA.LUCIA, DISTRICT V, QUEZON CITY	DATE: DESIGNED BY: DRAWN BY: JAV CHECKED BY: RGN REVISION NO.:	SUBMITTED BY: ENGR. FREDISWINDA DL. DE GUZMAN HEAD, PLANNING & DESIGN DIVISION	RECOMMENDING APPROVAL: ATTY. MARK DALE DIAMOND P. PERRAL CITY ENGINEER-QUEZON CITY	APPROVED BY: HON. MA. JOSEFINA G. BELMONTE CITY MAYOR	SHEET CONTENT: DEPED BUILDING - ROOF PLAN	SHEET NO.: AR-06 6 29

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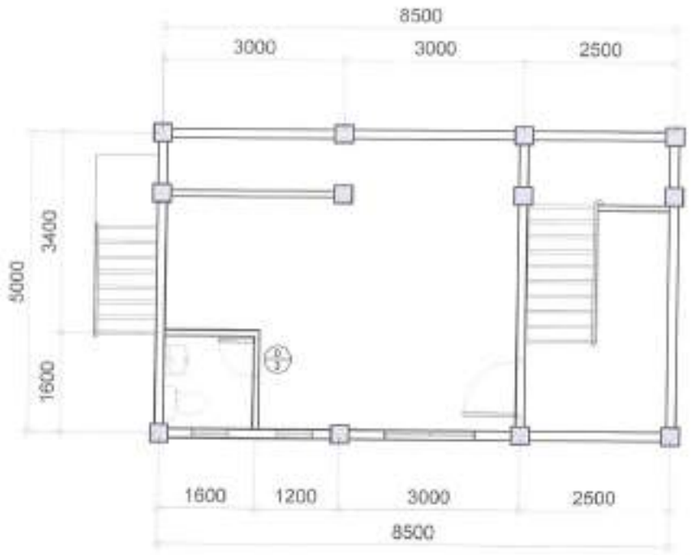
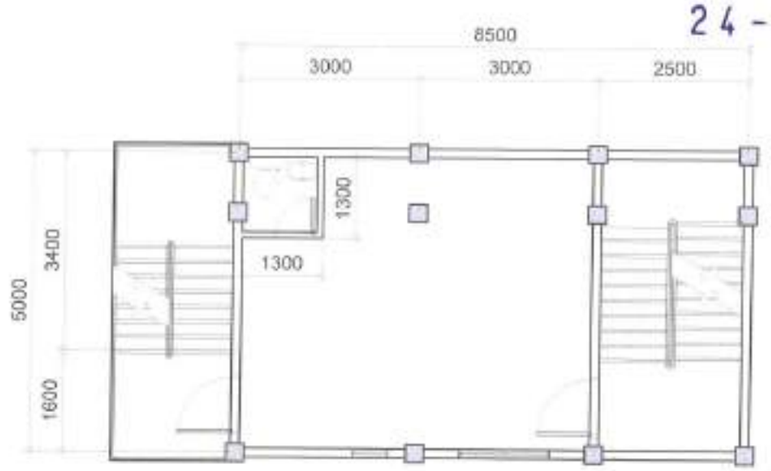
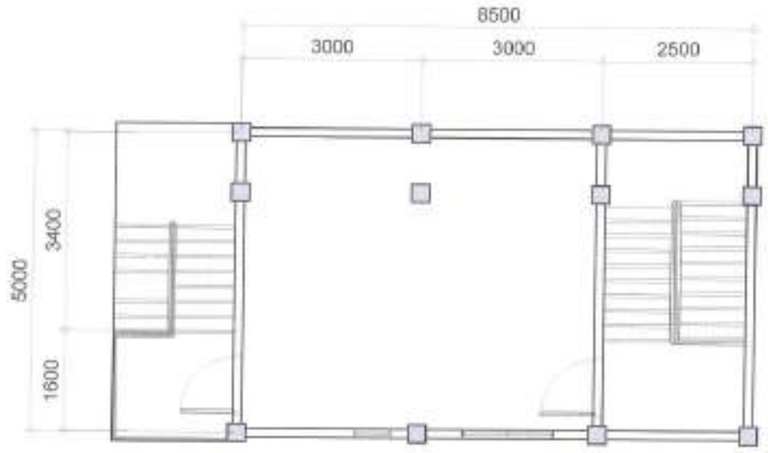


GROUND FLOOR PLAN



SECOND FLOOR PLAN



THIRD FLOOR PLAN

LEGENDS:

D3= 0.60m x 2.10m

NOTE:

- RESIZING OF WATERLINE SYSTEM
- INSTALLATION OF PUMPING SYSTEM
- REPLACEMENT OF DOOR AT GROUND FLOOR
- REPLACEMENT OF TILES

1 ROTARY BUILDING

SCALE: 1:100 MTS

Republika ng Pilipinas Lungsod ng Quezon DEPARTMENT OF ENGINEERING	PROJECT TITLE: PROPOSED UPGRADING OF ELECTRICAL SYSTEM AND WATER SYSTEM AT STA.LUCIA SENIOR HIGH SCHOOL LOCATION: BARANGAY STA.LUCIA, DISTRICT V, QUEZON CITY	DATE: DESIGNED BY: DRAWN BY: CHECKED BY: REVISION NO.:	SUBMITTED BY: ENGR. FREDISWINDA DL. DE GUZMAN HEAD , PLANNING & DESIGN DIVISION	RECOMMENDING APPROVAL: ATTY. MARK DAVE DIAMOND P. PERRAL CITY ENGINEER, QUEZON CITY	APPROVED BY: HON. MA. JOSEFINA G. BELMONTE CITY MAYOR	SHEET CONTENT: ROTARY BUILDING	SHEET NO.: AR-07 7 29

GENERAL NOTES

1. ALL WORKS SHALL BE EXECUTED IN ACCORDANCE TO THE LATEST EDITION OF THE NATIONAL STRUCTURAL CODE OF THE PHILIPPINES, THE NATIONAL BUILDING CODE OF THE PHILIPPINES AND OTHER RELATED LAWS AND ORDINANCES OF THIS CITY.
2. ALL WORKS SHALL BE SUPERVISED BY A REGISTERED PROFESSIONAL RELATED TO THE ACTIVITIES BEING UNDERTAKEN.
3. ALL WORKS SHALL BE COORDINATED WITH THE RESPECTIVE TRADES SO TO AVOID CONFLICTS DURING EXECUTION OF ACTIVITIES.
4. ALL NECESSARY PERMITS SHALL BE SECURED AND TURNED OVER TO THE CITY.
5. ALL DRAWINGS AND SPECIFICATIONS SHALL BE CORRECTLY REVIEWED BY THE CONTRACTOR AND SHALL IMMEDIATELY BE INFORMED IF DISCREPANCY (CIES) FOUND HEREIN.
6. ALL DIMENSIONS, ELEVATIONS AND REFERENCES, SHALL BE VERIFIED WITH THE ACTUAL CONDITION PRIOR TO EXECUTION.
7. SHOP DRAWINGS SHALL BE PROVIDED AS NECESSARY PRIOR TO THE EXECUTION.
8. ALL WORKS SHALL BE TESTED AND COMMISSIONED AS INDICATED IN THE SPECIFICATIONS WITH THE PRESENCE OF ALL PARTIES INVOLVED. RESULTS SHALL BE DOCUMENTED PROPERLY.
9. NO PIPES SHALL BE ALLOWED TO BE EMBEDDED IN STRUCTURAL MEMBERS, UNLESS OTHERWISE ALLOWED.

10. FORMS AND SCAFFOLDING

10.1 PROVIDE ADEQUATE SHORING AND BRACING TO WITHSTAND THE IMPOSED LOADS DURING CONSTRUCTION.
10.2 ALIGNMENT SHALL BE ESTABLISHED AND VALIDATED PRIOR TO ANY CONCRETE POURING ACTIVITIES.

11. CONCRETE AND REINFORCEMENTS

11.1 ALL CONCRETE SHALL DEVELOP A MINIMUM COMPRESSIVE STRENGTH AT THE END OF TWENTY EIGHT (28) DAYS WITH CORRESPONDING MAXIMUM SIZE AGGREGATE AND SLUMPS AS FOLLOWS:

LOCATION	STRENGTH	MAX. SIZE OF AGGREGATES	MAX. SLUMP
a. SLAB ON GRADE, CURBS, PAVEMENTS, WALL FOOTING	3000 PSI (21 Mpa)	1 in. (25mm)	4 in. (100mm)
b. BEAMS, COLUMNS SUSPENDED SLAB, COLUMN FOOTING	4000 PSI (28 Mpa)	3/4 in. (19mm)	4 in. (100mm)

11.2 ALL REINFORCING BARS SHALL CONFORM TO PNS#9 GRADE 275 (275MPa) FOR 12mm Ø AND SMALLER BARS AND GRADE 415 (415MPa) FOR 16mm Ø AND LARGER BARS.
11.3 MAINTAIN MINIMUM CONCRETE COVER FOR REINFORCING STEEL AS FOLLOWS:

CONCRETE COVER	
CONCRETE DEPOSITED DIRECTLY AGAINST GROUND	75 mm
SUSPENDED SLABS	20 mm
SLAB ON GRADE	40 mm
WALLS ABOVE GRADE	25 mm
BEAMS & COLUMNS	40 mm

11.4 ALL ANCHOR BOLTS, DOWELS, AND OTHER INSERTS SHALL BE PROPERLY POSITIONED AND SECURED IN PLACE PRIOR TO PLACING OF CONCRETE.
11.5 ALL CONCRETE SHALL BE KEPT MOIST FOR A MINIMUM OF SEVEN (7) CONSECUTIVE DAYS IMMEDIATELY AFTER POURING BY THE USE OF WET BURLAP, FOG SPRAYING, CURING COMPOUNDS OR OTHER APPROVED METHODS.
11.6 SCHEDULE FOR STRIPPING OF FORMS AND SHORES:

ITEMS	CURING TIME
FOUNDATION	24 HRS.
SUSPENDED SLAB EXCEPT WHEN ADDITIONAL LOADS ARE IMPOSED	14 DAYS
COLUMNS & WALLS	12 DAYS
BEAMS	21 DAYS

12. STRUCTURAL STEEL AND PLATES

12.1 ALL STRUCTURAL STEEL SHALL CONFORM TO ASTM (A-36) SPECIFICATIONS WITH MINIMUM YIELD STRENGTH fy=250 MPa
12.2 ANCHOR & FASTENER BOLTS: ALL BOLTS SHALL CONFORM TO ASTM (A-307) SPECIFICATIONS.
12.3 WELDING RODS: ALL WELDING RODS SHALL BE MILD STEEL, ELECTRODE, LOW HYDROGEN E7018 WITH MINIMUM YIELD STRENGTH = 428MPa

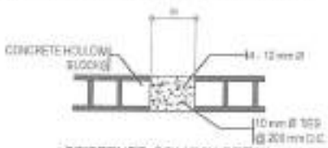
13. FOUNDATION

13.1 FOUNDATION IS DESIGNED BASED ON NATIONAL BUILDING CODE OF THE PHILIPPINES FOR AN ALLOWABLE SOIL BEARING CAPACITY OF 240 kPa.
13.2 FOUNDATION SHALL REST ON NATURAL SOIL, UNLESS OTHERWISE NOTED BY THE ENGINEER. NO PART OF THE FOUNDATION SHALL REST ON FILL.
13.3 THE CONTRACTOR SHALL NOTIFY THE ENGINEER UPON COMPLETION OF FOUNDATION EXCAVATION FOR ACTUAL SOIL CONDITIONS WHICH DO NOT CONFORM TO THE SOIL BEARING CAPACITY FOR PROPER REVISION.

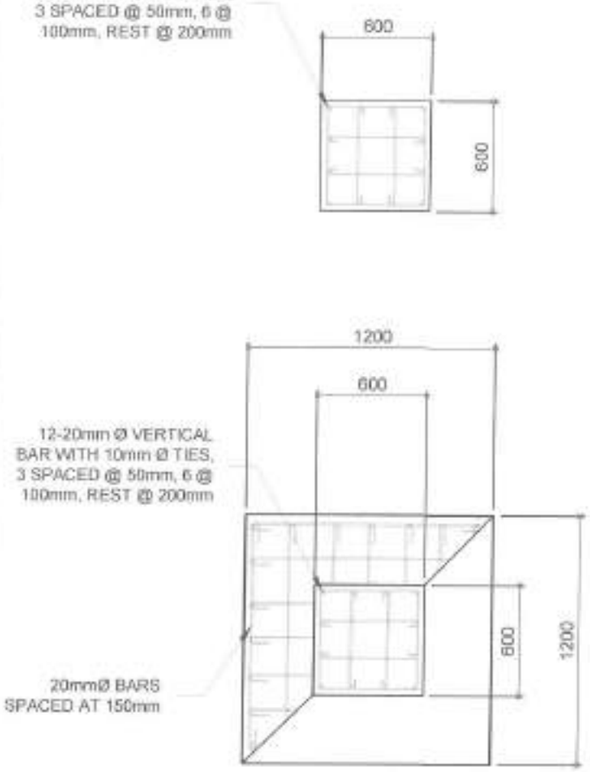
14. MASONRY WALLS

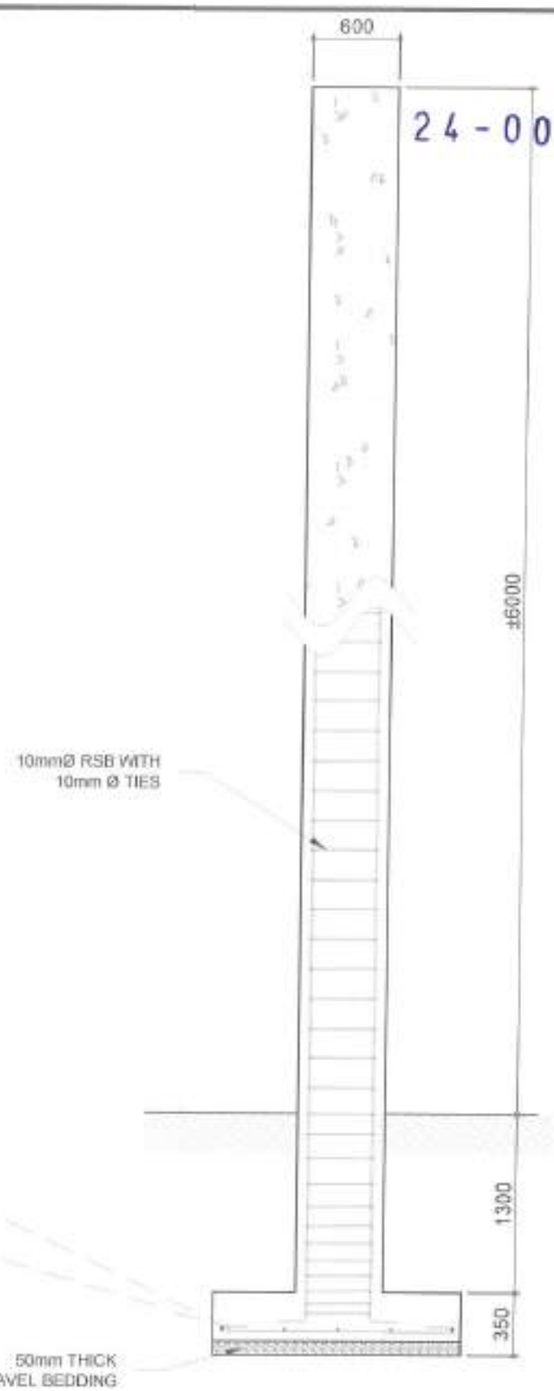
14.1 MORTAR & GROUT FOR ALL CONCRETE MASONRY SHALL CONFORM TO ASTM 270 - TYPE N & SHALL HAVE A MINIMUM OF 28 DAYS STANDARD CYLINDER COMPRESSIVE STRENGTH OF 17.5 MPa (2500 PSI).
14.2 ALL CHB SHALL BE LAID OUT WITH THE CELLS IN UNOBSTRUCTED VERTICAL CONTINUITY. ALL CELLS ESPECIALLY THOSE WITH REINFORCEMENT SHALL BE FILLED WITH MORTAR.
14.3 REINFORCEMENT, AS TABULATED BELOW SHALL BE PROVIDED UNLESS OTHERWISE SPECIFIED IN THE PLAN
14.4 ALL MASONRY WALLS SHALL BE PROVIDED W/ STIFFENER BEAM BLOCK & STIFFENER AS REQUIRED
14.4.1. FOR HIGH WALLS & EVERY 3000 mm & COLUMN (BOLT) AT 3000 mm ON CENTER
14.4.2. FOR DOORS & WINDOWS OPENING PROVIDE LINTEL BEAM SAME AS STIFFENER BEAM BLOCK

STIFFENER BEAM BLOCK



STIFFENER COLUMN DETAIL





1 GENERAL NOTES

2 SERVICE ENTRANCE POST DETAILS

SCALE: NTS

Republika ng Pilipinas
Lungsod ng Quezon
DEPARTMENT OF ENGINEERING

PROJECT TITLE:
PROPOSED UPGRADING OF ELECTRICAL SYSTEM AND WATER SYSTEM AT STA. LUCIA SENIOR HIGH SCHOOL

LOCATION:
BARANGAY STA.LUCIA, DISTRICT V, QUEZON CITY

DATE:
DESIGNED BY:
DRAWN BY: JAV
CHECKED BY: RDG
REVISION NO.:

SUBMITTED BY:
ENGR. FREDISWINDA DL. DE GUZMAN
HEAD , PLANNING & DESIGN DIVISION

RECOMMENDING APPROVAL:
ATTY. MARK DALE DIAMOND P. PERRAL
CITY ENGINEER, QUEZON CITY

APPROVED BY:
HON. MA. JOSEFINA G. BELMONTE
CITY MAYOR

SHEET CONTENT:
GENERAL NOTES
SERVICE ENTRANCE POST DETAILS

SHEET NO.
ST-01
8 29

GENERAL NOTES FOR THREE-PHASE SYSTEM

1. ALL WORKS SHALL BE EXECUTED IN ACCORDANCE TO THE LATEST EDITION OF THE PHILIPPINE ELECTRICAL CODE, PHILIPPINE ELECTRONICS CODE, THE NATIONAL BUILDING CODE OF THE PHILIPPINES AND OTHER RELATED LAWS AND ORDINANCES OF THIS CITY.

2. ALL WORKS SHALL BE SUPERVISED BY A REGISTERE PROFESSIONAL RELATED TO THE ACTIVITIES BEING UNDERTAKEN.

3. ALL WORKS SHALL BE COORDINATED WITH THE RESPECTIVE TRADES SO TO AVOID CONFLICTS DURING EXECUTION OF ACTIVITES.

4. ALL NECESSARY PERMITS SHALL BE SECURED AND TURNED-OVER TO THE CITY.

5. ALL DRAWINGS AND SPECIFICATIONS SHALL BE CORRECTLY REVIEWED BY THE CONTRACTOR AND SHALL IMMEDIATELY BE INFORMED IF DISCREPANCY (IES) FOUND HEREIN.

6. ALL DIMENSIONS, ELEVATIONS AND REFERENCES, SHALL BE VERIFIED WITH THE ACTUAL CONDITION PRIOR TO EXECUTION.

7. SHOP DRAWINGS SHALL BE PROVIDED AS NECESSARY PRIOR TO THE EXECUTION.

8. ALL WORKS SHALL BE TESTED AND COMMISSIONED AS INDICATED IN THE SPECIFICATIONS WITH THE PRESENCE OF ALL PARTIES INVOLVE/ RESULTS SHALL BE DOCUMENTED PROPERLY.

9. ALL PIPES AND LAYOUT ARE ONLY DIAGRAMMATIC, ACTUAL LAYOUT OF PIPES AND FITTINGS, UNLESS OTHERWISE REQUIRED, SHALL BE PROPERLY CONCEALED.

10. NO PIPES SHALL BE ALLOWED TO BE EMBEDDED IN STRUCTURAL MEMBERS, UNLESS OTHERWISE APPROVED.

11. ALL PIPES, FITTINGS, EQUIPMENT AND FIXTURES SHALL BE INSTALLLED IN ACCORDANCE TO MANUFACTURER'S SPECIFICATIONS AND INSTRUCTIONS.

12. SUPPORTS AND HANGERS SHALL BE PROVIDED ACCORDINGLY.

13. ALL EQUIPMENTS AND FIXTURES SHALL BE ENVIRONMENTAL FRIENDLY.

14. INSTALLATION OF SERVICE ENTRANCE
    14.1. THE TYPE OF SERVICE ENTRANCE SHALL BE THREE-PHASE, THREE-WIRE PLUS GROUND, 60 HERTZ, 230V AC NOMINAL.

    14.2. THE SERVICE ENTRANCE EQUIPMENT SHALL BE PROPERLY GROUNDED IN ACCORDANCE WITH THE PHILIPPINE ELECTRICAL CODE.
    14.3. THE MAIN OVERCURRENT PROTECTION DEVICE SHALL BE OF THERMAL MAGNETIC MCCB IN NEMA 3R WEATHERPROOF ENCLOSURE.

15. INSTALLATION OF LIGHTING AND POWER SYSTEM
    15.1. ALL LIGHTING AND CONVENIENCE OUTLET CIRCUITS SHALL BE 3.5 SQ. MM. THHN/THWN COPPER WIRE UNLESS OTHERWISE NOTED. MINIMUM SIZE OF WIRE SHALL BE 3.5 SQ. MM. COPPER WIRE. ALL WIRES AND CABLES SHALL BE COLOR CODED AS FOLLOWS:
    - PHASE A - RED
    - PHASE B - YELLOW
    - PHASE C - BLUE
    - NEUTRAL - WHITE
    - GROUND - GREEN

    15.2. ALL EMBEDDED BRANCH CIRCUITS SHALL BE PVC CONDUITS AND FOR EXPOSED INSTALLATION SHALL BE IMC SUPPORTED BY CONDUIT CLAMPS EVERY 700 MILIMETERS AND/OR CONDUIT HANGER SUPPORTS EVERY 1500 MILIMETERS.

    15.3. CONDUITS IN NO CASE SHALL NOT BE MORE THAN THE EQUIVALENT OF FOUR QUARTER BENDS IN ANY ONE RUN. ALL CONDUIT BENDS SHALL BE FIELD MADE BY USING HYDRAULIC BENDERS. MINIMUM BENDING RADIUS MUST BE IN ACCORDANCE TO THE CODE REQUIREMENTS.

    15.4. ALL POWER OUTLETS AND SWITCHES SHALL BE GROUNDING TYPE WITH PARALLEL SLOTS FOR 230 V.

    15.5. PROVIDE GROUND FAULT CURRENT INTERRUPTER CIRCUIT BREAKER FOR LOADS MARKED "GFCI" ON THE PLAN.

    15.6. ALL METALLIC CONDUITS, SWITCHES, LIGHTING FIXTURES, PANELBOARDS, EQUIPMENTS AND NON-CURRENT CARRYING METAL PARTS SHALL BE PROPERLY GROUNDED AND BONDED.

    15.7. THE GROUND RESISTANCE SHALL NOT BE MORE THAN 5 OHMS.

    15.8. ALL MOUNTING HEIGHTS FOR WALL MOUNTED DEVICES SHALL BE AS FOLLOWS:
    A. LIGHTING SWITCH - 1400 MM ABOVE FLOOR FINISH
    B. CONVENIENCE OUTLET - 300 MM ABOVE FLOOR FINISH
       - 150MM ABOVE WORKING COUNTER.
    C. PANELBOARD AND CABINETS - 1400 MM ABOVE FLOOR FINISH
    D. EXIT LIGHT - 150 MM TOP OF DOOR JAMB
    E. EMERGENCY LIGHT - 2000 ABOVE FLOOR EMERGENCY

    15.1. PULL BOXES SHALL BE WHENEVER NECESSARYTO FACILITATE WIRE PULLING EVEN IF THESE ARE NOT INDICATED ON PLANS.

    15.2. FOR EACH SPARE BRANCH CIRCUIT IN PANELBOARD, PROVIDE ONE 20MM DIAMETER EMPTY CONDUIT TERMINATED TO 100MM OCTAGONAL BOX ABOVE CEILING. MINIMUM SIZE OF PULLBOX SHALL BE 150MM X150MM X 100MM.

    15.3. ALL CIRCUIT BREAKERS SHALL BE BOLT-ON TYPE WITH INTERRUPTING CAPACITY AS INDICATED IN THE PLANS. PANELBOARDS SHALL BE GALVANIZED SHEET POWDER COATED GAGE 16 MINIMUM.

    15.4. FEEDER AND BRANCH CIRCUIT CONDUCTORS IN CABLE TRAYS SHALL BE GROUPED, BONDED AND TAGGED TO INDICATE CLEARLY THE ELECTRICAL CHARACTERISTICS SUCH AS CIRCUIT NUMBER AND PANEL DESIGNATION.

    15.5. REFER TO MECHANICAL, PLUMBING AND FIRE PROTECTION DRAWINGS FOR RATINGS AND LOCATIONS OF EQUIPMENT AS WELL AS THEIR CONTROL SEQUENCES AS SPECIFIED AND OR SHOWN UNDER THEIR RESPECTIVE SECTIONS.

    15.6. ALL MATERIALS TO BE USED AND THE EQUIPMENT TO BE INSTALLED SHALL BE OF THE BEST QUALITY, BRAND NEW AS SPECIFIED. IT MUST BE APPROVED TYPE FOR THE PARTICULAR LOCATION AND PURPOSE INTENDED.

16. INSTALLATION OF AUXILIARY SYSTEM (VOICE/DATA SYSTEM, CLOSED CIRCUIT TELEVISION SYSTEM AND FIRE DETECTION ALARM SYSTEM)
    16.1. ALL AUXILIARY WIRINGS MUST REFER TO WIRE SCHEDULE AS INDICATED ON PLANS.

    16.2. MINIMUM SIZE AND TYPE OF CONDUIT SHALL BE AS FOLLOWS:
    A. VOICE DATA SYSTEM - 20MM Ø PVC
    B. CCTV SYTEM - 20MM Ø PVC
    C. FDAS SYSTEM - 15MM Ø EMT/IMC

    16.1. ALL EMBEDDED CIRCUITS SHALL BE PVC CONDUITS AND FOR EXPOSED INSTALLATION SHALL BE EMT/IMC SUPPORTED BY CONDUIT CLAMPS EVERY 700 MILIMETERS AND/OR CONDUIT HANGER SUPPORTS EVERY 1500 MILIMETERS.

    16.2. ALL MOUNTING HEIGHTS FOR WALL MOUNTED DEVICES SHALL BE AS FOLLOWS:
    A. TELEPHONE OUTLET - 300 MM ABOVE FLOOR FINISH
    B. CATV OUTLET - 300 MM ABOVE FLOOR FINISH
    C. DATA OUTLET - 30MM ABOVE WORKING COUNTER.
    D. CABINETS - 1400 MM ABOVE FLOOR FINISH

    16.1. BOXES, WIRE, GUTTERS, ENCLOSURE SHALL BE FABRICATED FROM STEEL WITH THICKNESS AS FOLLOWS:

MAX. WIDTH OF THE WIDEST SURFACE STEEL	GA
UP TO INCLUDING 152.40 MM	GA 16 PAINTED WITH METAL PRIMER EPOXY AND TOPCOAT
OVER 152.40 MM BUT NOT OVER 457.30	GA 14 PAINTED WITH METAL PRIMER EPOXY AND TOPCOAT
OVER 457.30 MM BUT NOT OVER 762 MM	GA 12 PAINTED WITH METAL PRIMER EPOXY AND TOPCOAT
OVER 762 MM	GA 10 PAINTED WITH METAL PRIMER EPOXY AND TOPCOAT

    16.1. THE COMMUNICATION GROUND RESISTANCE SHALL NOT EXCEED 2 OHMS.

    16.2. ALL MATERIALS TO BE USED AND THE EQUIPMENT TO BE INSTALLED SHALL BE OF THE BEST QUALITY, BRAND NEW AS SPECIFIED. IT MUST BE APPROVED TYPE FOR THE PARTICULAR LOCATION AND PURPOSE INTENDED.

1 GENERAL NOTES

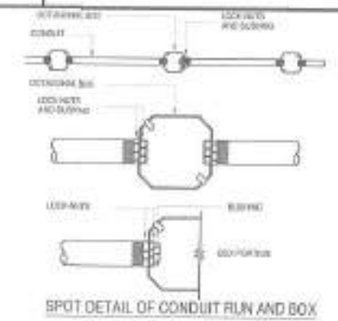
SCALE NTS.

24-00063

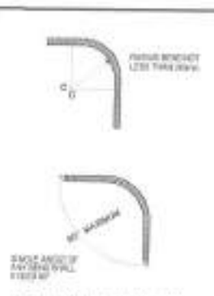
PROPOSED TWO WIRE FEEDER LINE
SERVICE ENTRANCE
BRANCH LINE FROM BUILDING TO MDP
KW-HR METER
PANEL BOARD
3-SPOOL SECONDARY RACK
PROPOSED SERVICE ENTRANCE POST
TAPPING POINT

2 LEGENDS AND SYMBOLS

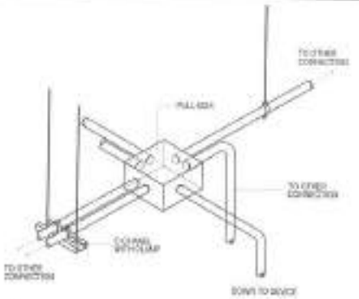
SCALE NTS.



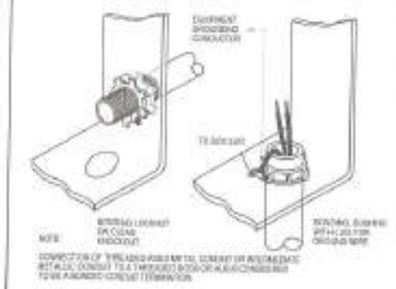
SPOT DETAIL OF CONDUIT RUN AND BOX



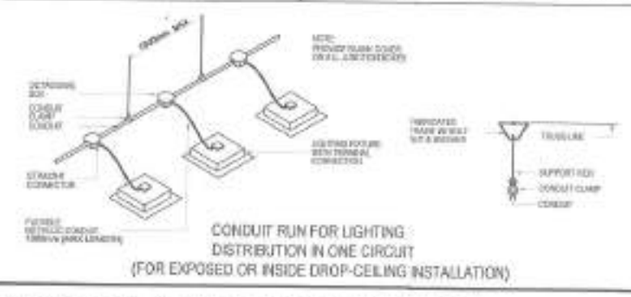
BENDING RADIUS DETAIL



PROPER CONDUIT LAYOUT at PULL BOX



BONDED RACEWAY TERMINATION FOR SHEET METAL



CONDUIT RUN FOR LIGHTING DISTRIBUTION IN ONE CIRCUIT
(FOR EXPOSED OR INSIDE DROP-CEILING INSTALLATION)

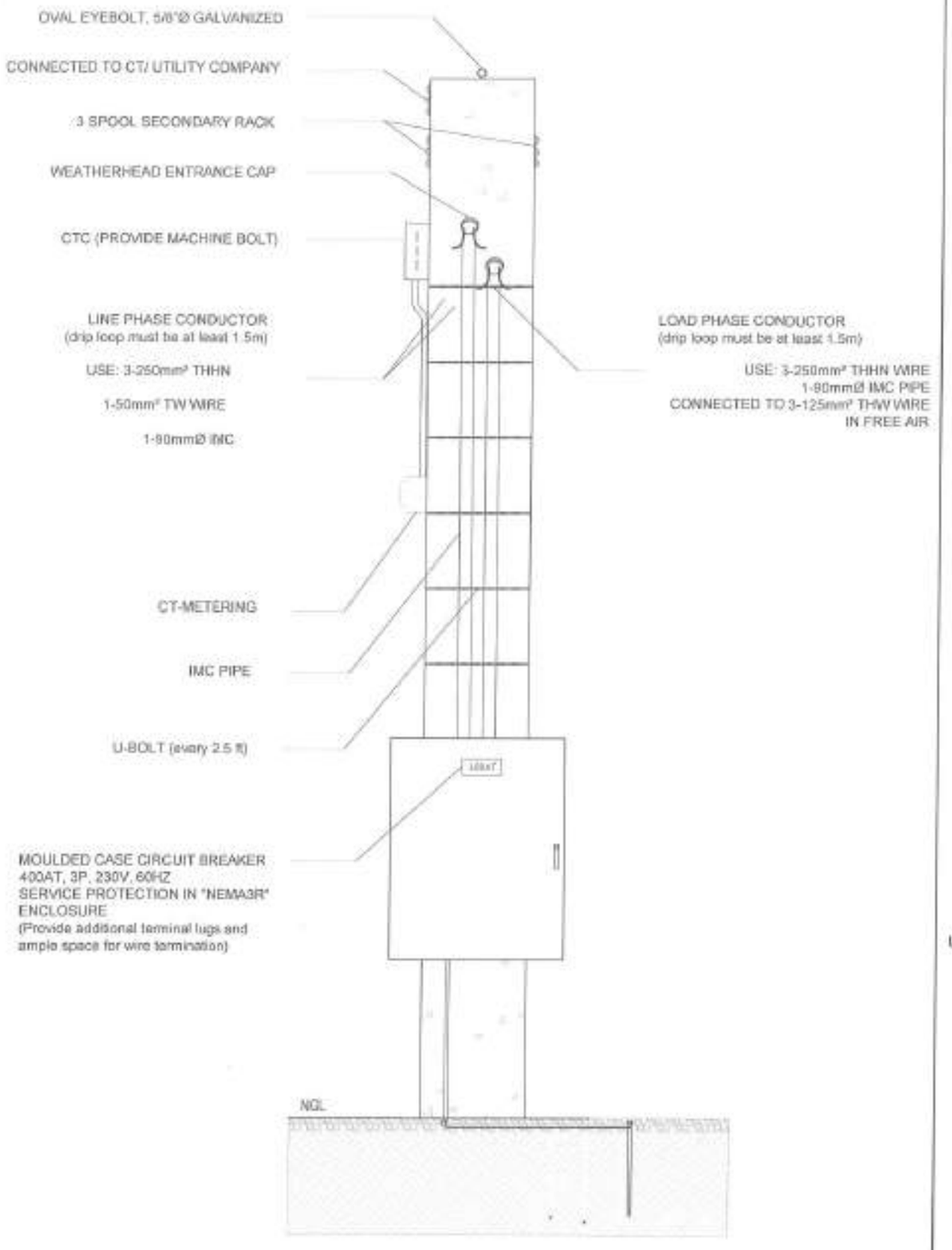
3 MISCELLANEOUS DETAILS

SCALE NTS.

Republika ng Pilipinas
Lungsod ng Quezon
DEPARTMENT OF ENGINEERING

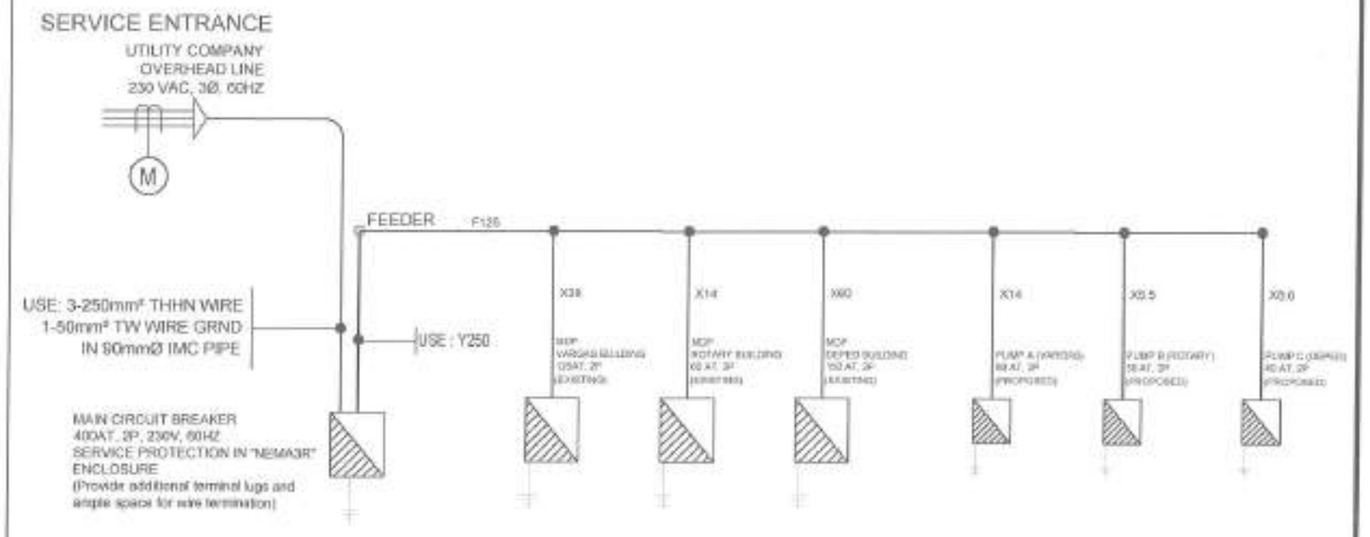
PROJECT TITLE: PROPOSED UPGRADING OF ELECTRICAL SYSTEM AND WATER SYSTEM AT STA. LUCIA SENIOR HIGH SCHOOL LOCATION: BARANGAY STA.LUCIA, DISTRICT V, QUEZON CITY	DATE: DESIGNED BY: DRAWN BY: VJU CHECKED BY: RDM REVISION NO.:	SUBMITTED BY: ENGR. FREDISWINDO L. DE GUZMAN HEAD , PLANNING & DESIGN DIVISION	RECOMMENDING APPROVAL: ATTY. MARK DALE DIAMOND P. PERRAL CITY ENGINEER, QUEZON CITY	APPROVED BY: HON. MA. JOSEFINA G. BELMONTE CITY MAYOR	SHEET CONTENT: GENERAL NOTES LEGENDS AND SYMBOLS MISCELLANEOUS DETAILS	SHEET NO.: EL-01 9 29

24-00063



CODE	DESCRIPTION
PHASE ABC	A - RED B - YELLOW C - BLUE NEUTRAL - BLACK GROUND - WHITE

CODE	DESCRIPTION
X125	3-125MM² THW COPPER WIRE (AERIAL)
2Y250	2 SETS OF 3-250MM² THHN WIRE 1-50MM² TW WIRE GRD
X250	2-250MM² THHN WIRE 1-50MM² TW WIRE GRD
X80	2-80MM² THHN WIRE 1-22MM² TW WIRE GRD
X60	2-60MM² THHN WIRE 1-22MM² TW WIRE GRD



1 SERVICE ENTRANCE DETAILS

SCALE NTS.

2 RISER DIAGRAM

SCALE NTS.

Republika ng Pilipinas
Lungsod ng Quezon
DEPARTMENT OF ENGINEERING
Civic Center Building B, City Hall Compound, Elliptical Road
Diliman, Quezon City 1100
Telefax : +63 2 8988 4242
E-mail address : engineering@quezoncity.gov.ph

PROJECT TITLE:	PROPOSED UPGRADING OF ELECTRICAL SYSTEM AND WATER SYSTEM AT STA. LUCIA SENIOR HIGH SCHOOL
LOCATION:	BARANGAY STA.LUCIA, DISTRICT V, QUEZON CITY
DATE:	
DESIGNED BY:	
DRAWN BY:	VAU
CHECKED BY:	
REVISION NO.:	

SUBMITTED BY:	RECOMMENDING APPROVAL:	APPROVED BY:	SHEET CONTENT	SHEET NO.
ENGR. FREDISWINDA L. DE GUZMAN HEAD , PLANNING & DESIGN DIVISION	ATTY. MARK DALE DIAMOND P. PERRAL CITY ENGINEER, QUEZON CITY	HON. MA. JOSEFINA G. BELMONTE CITY MAYOR	SERVICE ENTRANCE DETAILS RISER DIAGRAM	EL-02 10|29

24-00063

PANEL: **MAIN DISTRIBUTION PANEL (MDP)**
MAIN: **400AT, 400AF, 3P, 230V, MCCB**

CKT NO.	VOLTS	OUTLET LO	OUTLET CO	OTHER LOAD SERVICE	AMPERE LOAD AB	AMPERE LOAD CA	AMPERE LOAD BC	3Ø	VOLT AMPERE	CIRCUIT BREAKER	SIZE OF WIRE
1	230			VARGAS BUILDING	116.26	0.00	0.00	0.00	26740.00	125AT, 2P, MCCB	2 - 38mm² THHN + 1 - 14mm² TW (G) in 32mmØ IMC
2	230			ROTARY BUILDING	0.00	58.17	0.00	0.00	13380.00	60AT, 2P, MCCB	2 - 14mm² THHN + 1 - 8.0mm² TW (G) in 25mmØ IMC
3	230			DEPED BUILDING	0.00	0.00	147.83	0.00	34000.00	150AT, 2P, MCCB	2 - 60mm² THHN + 1 - 22mm² TW (G) in 40mmØ IMC
4	230			PUMP A	0.00	30.00	0.00	0.00	6900.00	60AT, 2P, MCCB	2 - 14mm² THHN + 1 - 8.0mm² TW (G) in 25mmØ IMC
5	230			PUMP B	0.00	13.42	0.00	0.00	3087.00	30AT, 2P, MCCB	2 - 5.5mm² THHN + 1 - 3.5mm² TW (G) in 15mmØ IMC
6	230			PUMP C	0.00	21.52	0.00	0.00	4950.00	40AT, 2P, MCCB	2 - 8.0mm² THHN + 1 - 5.5mm² TW (G) in 20mmØ IMC
TOTAL					**116.26**	**123.12**	**147.83**	**0.00**	**89057.00**		

I = (147.83 x 1.732) + (15 x 0.25) **259.78 Amperes**

Feeder Line:

Use: 3 - 250mm² THHN + 1 - 50mm² TW (G) in 90mmØ IMC

Distribution Feeder:

Use: 3 - 125mm² THW in FREE AIR

PANEL: **VARGAS BUILDING: DISTRIBUTION PANEL (EXISTING)**
MAIN: **125AT, 200AF, 2P, 230V, MCCB**

CKT NO.	VOLTS	OUTLET LO	OUTLET CO	OTHER LOAD SERVICE	AMPERE LOAD AB	AMPERE LOAD CA	AMPERE LOAD BC	3Ø	VOLT AMPERE	CIRCUIT BREAKER	SIZE OF WIRE
1	230			LPP1	30.70				7060.00	100AT, 2P, MCCB	2 - 30mm² THHN + 1 - 8.0mm² TW (G) in 32mmØ IMC
2	230			LPP2	28.52				6560.00	100AT, 2P, MCCB	2 - 30mm² THHN + 1 - 8.0mm² TW (G) in 32mmØ IMC
3	230			LPP3	28.52				6560.00	100AT, 2P, MCCB	2 - 30mm² THHN + 1 - 8.0mm² TW (G) in 32mmØ IMC
4	230			LPP4	28.52				6560.00	100AT, 2P, MCCB	2 - 30mm² THHN + 1 - 8.0mm² TW (G) in 32mmØ IMC
TOTAL					**116.26**	**0.00**	**0.00**	**0.00**	**26740.00**		

I = (26740 / 230) x 80% DF **93.01 Amperes**

Feeder Line:

Use: 2 - 38mm² THHN + 1 - 14mm² TW (G) in 32mmØ IMC

1 SCHEDULE OF LOADS

Republika ng Pilipinas
Lungsod ng Quezon
DEPARTMENT OF ENGINEERING

PROJECT TITLE:
PROPOSED UPGRADING OF ELECTRICAL SYSTEM AND WATER SYSTEM AT STA. LUCIA SENIOR HIGH SCHOOL

LOCATION:
BARANGAY STA.LUCIA, DISTRICT V, QUEZON CITY

DATE:
DESIGNED BY:
DRAWN BY: VAV
CHECKED BY:
REVISION NO.:

SUBMITTED BY:
ENGR. FREDISWINDO L. DE GUZMAN
HEAD, PLANNING & DESIGN DIVISION

RECOMMENDING APPROVAL:
ATTY. MARK DALE DIAMOND P. PERRAL
CITY ENGINEER, QUEZON CITY

APPROVED BY:
HON. MA. JOSEFINA G. BELMONTE
CITY MAYOR

SHEET CONTENT:
SHEDULE OF LOADS

SHEET NO.
EL-03
11 29

24-00063

PANEL: **VARGAS BUILDING: LPP1 (EXISTING)**
MAIN: **40AT, 100AF, 2P, 230V, MCCB**

CKT NO.	VOLTS	OUTLET LO	OUTLET CO	OTHER LOAD SERVICE	AMPERE LOAD AB	AMPERE LOAD CA	AMPERE LOAD BC	3Ø	VOLT AMPERE	CIRCUIT BREAKER	SIZE OF WIRE
1	230	12			5.22				1200	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
2	230	15			6.52				1500	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
3	230			6 - WALL FAN	2.61				600	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
4	230		7		5.48				1260	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
5	230			FACP	2.17				500	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
6	230			SPARE	4.35				1000	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
7	230			SPARE	4.35				1000	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
8	230			SPARE							
TOTAL					30.70	0.00	0.00	0.00	7060.00		

I = 7060 / 230 **30.70 Amperes**

Feeder Line:

Use: 2 - 8.0mm² THHN + 1 - 5.5mm² TW (G) in 25mmØ IMC

PANEL: **VARGAS BUILDING: LPP2, LPP3 & LPP4 (TYPICAL - EXISTING)**
MAIN: **40AT, 100AF, 2P, 230V, MCCB**

CKT NO.	VOLTS	OUTLET LO	OUTLET CO	OTHER LOAD SERVICE	AMPERE LOAD AB	AMPERE LOAD CA	AMPERE LOAD BC	3Ø	VOLT AMPERE	CIRCUIT BREAKER	SIZE OF WIRE
1	230	12			5.22				1200	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
2	230	15			6.52				1500	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
3	230			6 - WALL FAN	2.61				600	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
4	230		7		5.48				1260	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
5	230			SPARE	4.35				1000	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
6	230			SPARE	4.35				1000	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
TOTAL					28.52	0.00	0.00	0.00	6560.00		

I = 6560 / 230 **28.52 Amperes**

Feeder Line:

Use: 2 - 8.0mm² THHN + 1 - 5.5mm² TW (G) in 25mmØ IMC

1 SCHEDULE OF LOADS

Republika ng Pilipinas
Lungsod ng Quezon
DEPARTMENT OF ENGINEERING
City Hall Compound, Elliptical Road, Diliman, Quezon City
Telefax: +63 2 8988 4242
E-mail address: engineering@quezoncity.gov.ph

PROJECT TITLE:	DATE:	SUBMITTED BY:	RECOMMENDING APPROVAL:	APPROVED BY:	SHEET CONTENT	SHEET NO.
PROPOSED UPGRADING OF ELECTRICAL SYSTEM AND WATER SYSTEM AT STA. LUCIA SENIOR HIGH SCHOOL	DESIGNED BY: DRAWN BY: YAV CHECKED BY: RMN	ENGR. FREDISWINDA DL. DE GUZMAN, HEAD, PLANNING & DESIGN DIVISION	ATTY. MARK DALE DIAMOND P. PERRAL, CITY ENGINEER, QUEZON CITY	HON. MA. JOSEFINA G. BELMONTE, CITY MAYOR	SCHEDULE OF LOADS	EL-04 1229
LOCATION: BARANGAY STA. LUCIA, DISTRICT V, QUEZON CITY	REVISION NO.:					

24-00063

PANEL: **ROTARY BUILDING: DISTRIBUTION PANEL (EXISTING)**
MAIN: **60AT, 100AF, 2P, 230V, MCCB**

CKT NO.	VOLTS	OUTLET LO	OUTLET CO	OTHER LOAD SERVICE	AMPERE LOAD AB	AMPERE LOAD CA	AMPERE LOAD BC	3Ø	VOLT AMPERE	CIRCUIT BREAKER	SIZE OF WIRE
1	230	14				6.09			1400	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
2	230	15				6.52			1500	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
3	230		10			7.83			1800	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
4	230		9			7.04			1620	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
5	230			2 HP ACU		11.00			2530	30AT, 2P, Bolt-On	2 - 5.5mm² THHN + 1 - 3.5mm² TW (G) in 20mmØ PVC
6	230			2 HP ACU		11.00			2530	30AT, 2P, Bolt-On	2 - 5.5mm² THHN + 1 - 3.5mm² TW (G) in 20mmØ PVC
7	230			SPARE		4.35			1000	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
8	230			SPARE		4.35			1000	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
TOTAL					0.00	58.17	0.00	0.00	13380.00		

I = (13380 / 230) x 80% D.F. **46.54 Amperes**

Feeder Line:

Use: 2 - 14mm² THHN + 1 - 8.0mm² TW (G) in 25mmØ IMC

PANEL: **DEPED BUILDING: DISTRIBUTION PANEL (EXISTING)**
MAIN: **150AT, 200AF, 2P, 230V, MCCB**

CKT NO.	VOLTS	OUTLET LO	OUTLET CO	OTHER LOAD SERVICE	AMPERE LOAD AB	AMPERE LOAD CA	AMPERE LOAD BC	3Ø	VOLT AMPERE	CIRCUIT BREAKER	SIZE OF WIRE
1	230			LPP1			36.96		8500.00	50AT, 2P, MCCB	2 - 14mm² THHN + 1 - 8.0mm² TW (G) in 25mmØ IMC
2	230			LPP2			36.96		8500.00	50AT, 2P, MCCB	2 - 14mm² THHN + 1 - 8.0mm² TW (G) in 25mmØ IMC
3	230			LPP3			36.96		8500.00	50AT, 2P, MCCB	2 - 14mm² THHN + 1 - 8.0mm² TW (G) in 25mmØ IMC
4	230			LPP4			36.96		8500.00	50AT, 2P, MCCB	2 - 14mm² THHN + 1 - 8.0mm² TW (G) in 25mmØ IMC
TOTAL					0.00	0.00	147.83	0.00	34000.00		

I = (34000 / 230) x 80% D.F. **118.26 Amperes**

Feeder Line:

Use: 2 - 80mm² THHN + 1 - 22mm² TW (G) in 50mmØ IMC

1 SCHEDULE OF LOADS

Republika ng Pilipinas
Lungsod ng Quezon
DEPARTMENT OF ENGINEERING

PROJECT TITLE:
PROPOSED UPGRADING OF ELECTRICAL SYSTEM AND WATER SYSTEM AT STA. LUCIA SENIOR HIGH SCHOOL

LOCATION:
BARANGAY STA LUCIA, DISTRICT V, QUEZON CITY

DATE:
DESIGNED BY:
DRAWN BY: VAV
CHECKED BY: REV
REVISION NO.:

SUBMITTED BY:
ENGR. FREDISWINDO V. DE GUZMAN
HEAD, PLANNING & DESIGN DIVISION

RECOMMENDING APPROVAL:
ATTY. MARK DALE DIAMOND P. PERRAL
CITY ENGINEER, QUEZON CITY

APPROVED BY:
HON. MA. JOSEFINA G. BELMONTE
CITY MAYOR

SHEET CONTENT:
SCHEDULE OF LOADS

SHEET NO.
EL-05
13 29

24-00063

PANEL: **DEPED BUILDING: LPP1, LPP2, LPP3 & LPP4 (TYPICAL - EXISTING)**
MAIN: **60AT, 100AF, 2P, 230V, MCCB**

CKT NO.	VOLTS	OUTLET		OTHER LOAD SERVICE	AMPERE LOAD			3Ø	VOLT AMPERE	CIRCUIT BREAKER	SIZE OF WIRE
		LO	CO		AB	CA	BC				
1	230	15			6.52				1500	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
2	230	14			6.09				1400	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
3	230		6		4.70				1080	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
4	230		6		4.70				1080	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
5	230			4 - ORBIT FAN	3.13				720	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
6	230			4 - ORBIT FAN	3.13				720	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
7	230			SPARE	4.35				1000	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
8	230			SPARE	4.35				1000	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
TOTAL					36.96	0.00	0.00	0.00	8500.00		

I = 10760 / 230 **36.96 Amperes**

Feeder Line:

Use: 2 - 14mm² THHN + 1 - 8.0mm² TW (G) in 25mmØ IMC

PANEL: **PUMP A (VARGAS BUILDING) - PROPOSED**
MAIN: **60AT, 100AF, 2P, 230V, MCCB**

CKT NO.	VOLTS	OUTLET		OTHER LOAD SERVICE	AMPERE LOAD			3Ø	VOLT AMPERE	CIRCUIT BREAKER	SIZE OF WIRE
		LO	CO		AB	CA	BC				
1	230			BOOSTER PUMP		15.00			3450	40AT, 2P, Bolt-On	2 - 8.0mm² THHN + 1 - 5.5mm² TW (G) in 20mmØ IMC
2	230			BOOSTER PUMP		15.00			3450	40AT, 2P, Bolt-On	2 - 8.0mm² THHN + 1 - 5.5mm² TW (G) in 20mmØ IMC
3	230			SPARE							
4	230			SPARE							
TOTAL					0.00	30.00	0.00	0.00	6900.00		

I = (6900 / 230) + (15 x 0.25) **33.75 Amperes**

Feeder Line:

Use: 2 - 14mm² THHN + 1 - 8.0mm² TW (G) in 25mmØ IMC

1 SCHEDULE OF LOADS

Republika ng Pilipinas
Lungsod ng Quezon
DEPARTMENT OF ENGINEERING

PROJECT TITLE:
PROPOSED UPGRADING OF ELECTRICAL SYSTEM AND WATER SYSTEM AT STA. LUCIA SENIOR HIGH SCHOOL

LOCATION:
BARANGAY STA.LUCIA, DISTRICT V, QUEZON CITY

DATE:

DESIGNED BY:

DRAWN BY: VAV

CHECKED BY:

REVISION NO.:

SUBMITTED BY:
ENGR. FREDISWINDO L. DE GUZMAN
HEAD, PLANNING & DESIGN DIVISION

RECOMMENDING APPROVAL:
ATTY. MARK DALE DIAMOND P. PERRAL
CITY ENGINEER, QUEZON CITY

APPROVED BY:
HON. MA. JOSEFINA G. BELMONTE
CITY MAYOR

SHEET CONTENT:
SCHEDULE OF LOADS

SHEET NO.
EL-06
14 29

24-00063

PANEL: **PUMP B (ROTARY BUILDING) - PROPOSED**
MAIN: **30AT, 100AF, 2P, 230V, MCCB**

CKT NO.	VOLTS	OUTLET LO	OUTLET CO	OTHER LOAD SERVICE	AMPERE LOAD AB	AMPERE LOAD CA	AMPERE LOAD BC	3Ø	VOLT AMPERE	CIRCUIT BREAKER	SIZE OF WIRE
1	230			BOOSTER PUMP		6.90			1587	30AT, 2P, Bolt-On	2 - 5.5mm² THHN + 1 - 3.5mm² TW (G) in 15mmØ IMC
2	230			SPARE		6.52			1500	30AT, 2P, Bolt-On	2 - 5.5mm² THHN + 1 - 3.5mm² TW (G) in 15mmØ IMC
TOTAL					**0.00**	**13.42**	**0.00**	**0.00**	**3087.00**		

I = (3087 / 230) + (6.9 x 0.25) **15.15 Amperes**

Feeder Line:

Use: 2 - 5.5mm² THHN + 1 - 3.5mm² TW (G) in 15mmØ IMC

PANEL: **PUMP C (DEPED BUILDING) - PROPOSED**
MAIN: **40AT, 100AF, 2P, 230V, MCCB**

CKT NO.	VOLTS	OUTLET LO	OUTLET CO	OTHER LOAD SERVICE	AMPERE LOAD AB	AMPERE LOAD CA	AMPERE LOAD BC	3Ø	VOLT AMPERE	CIRCUIT BREAKER	SIZE OF WIRE
1	230			BOOSTER PUMP		15.00			3450	40AT, 2P, Bolt-On	2 - 8.0mm² THHN + 1 - 5.5mm² TW (G) in 20mmØ IMC
2	230			SPARE		6.52			1500	30AT, 2P, Bolt-On	2 - 5.5mm² THHN + 1 - 3.5mm² TW (G) in 15mmØ IMC
TOTAL					**0.00**	**21.52**	**0.00**	**0.00**	**4950.00**		

I = (4950 / 230) + (15 x 0.25) **25.27 Amperes**

Feeder Line:

Use: 2 - 8.0mm² THHN + 1 - 5.5mm² TW (G) in 20mmØ IMC

1 SCHEDULE OF LOADS

Republika ng Pilipinas
Lungsod ng Quezon
DEPARTMENT OF ENGINEERING

PROJECT TITLE:
PROPOSED UPGRADING OF ELECTRICAL SYSTEM AND WATER SYSTEM AT STA. LUCIA SENIOR HIGH SCHOOL

LOCATION:
BARANGAY STA.LUCIA, DISTRICT V, QUEZON CITY

DATE:
DESIGNED BY:
DRAWN BY: VAV
CHECKED BY:
REVISION NO.:

SUBMITTED BY:
ENGR. FREDISWINDE C. DE GUZMAN
HEAD, PLANNING & DESIGN DIVISION

RECOMMENDING APPROVAL:
ATTY. MARK DALE DIAMOND P. PERRAL
CITY ENGINEER, QUEZON CITY

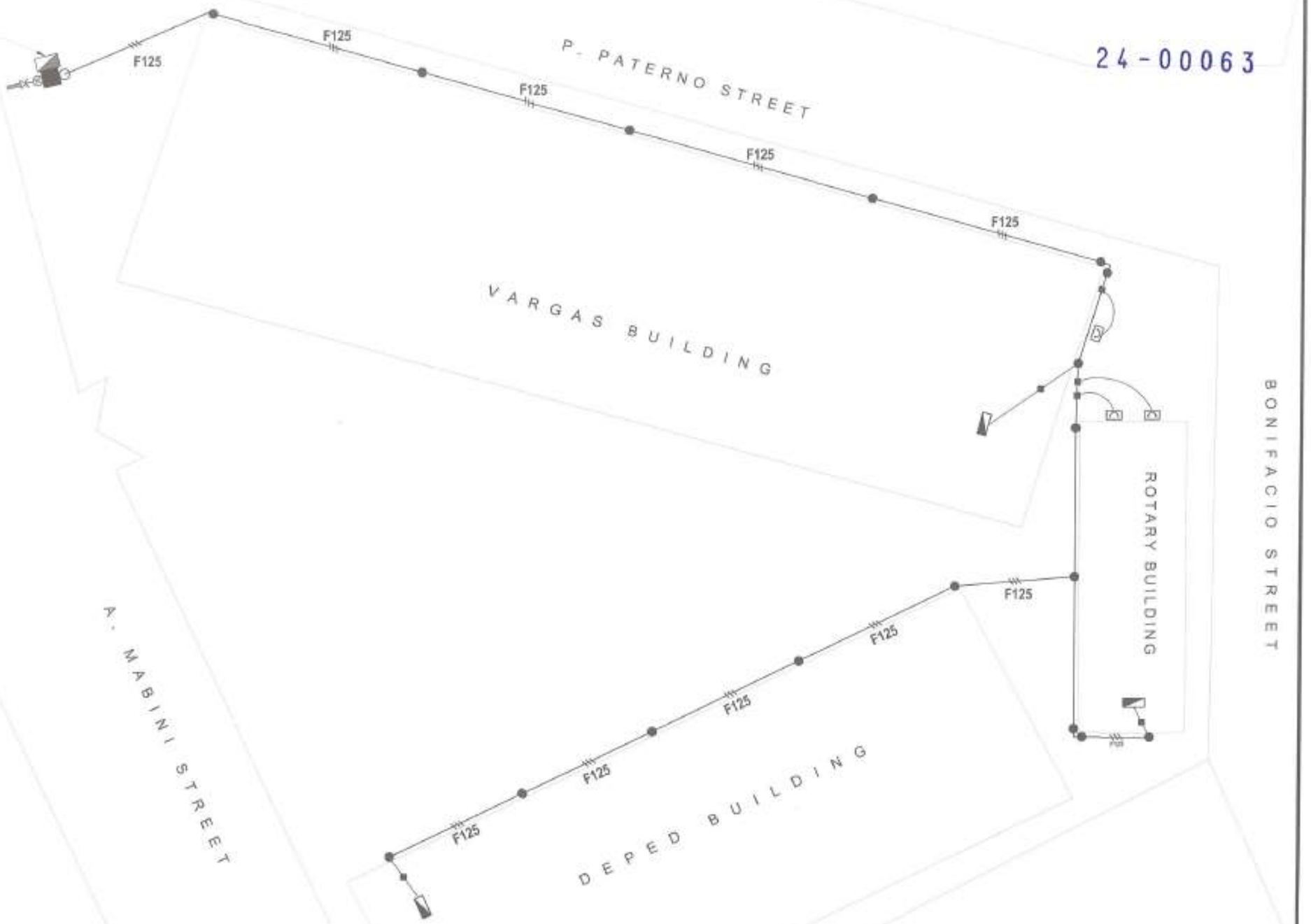
APPROVED BY:
HON. MA. JOSEFINA G. BELMONTE
CITY MAYOR

SHEET CONTENT:
SCHEDULE OF LOADS

SHEET NO.
EL-07
15 29

PROPOSED SERVICE ENTRACE POST
MCCB, 400AT, 3P, 230V, 60Hz, with
IN WEATHERPROOF "NEMA 3R"
ENCLOSURE

24-00063



1 ELECTRICAL LAYOUT

Republika ng Pilipinas
Lungsod ng Quezon
DEPARTMENT OF ENGINEERING
Civic Center Building D, City Hall Compound, Elliptical Road
Diliman, Central 1100 Quezon City
Telefax: +63 2 8988 4242
E-mail address: engineering@quezoncity.gov.ph

PROJECT TITLE:	PROPOSED UPGRADING OF ELECTRICAL SYSTEM AND WATER SYSTEM AT STA. LUCIA SENIOR HIGH SCHOOL
LOCATION:	BARANGAY STA.LUCIA, DISTRICT V, QUEZON CITY
DATE:	
DESIGNED BY:	
DRAWN BY:	YAV
CHECKED BY:	
REVISION NO.:	
SUBMITTED BY:	ENGR. FREDISWINDA DL. DE GUZMAN, HEAD, PLANNING & DESIGN DIVISION
RECOMMENDING APPROVAL:	ATTY. MARK DALE DIAMOND P. PERRAL, CITY ENGINEER, QUEZON CITY
APPROVED BY:	HON. MA. JOSEFINA G. BELMONTE, CITY MAYOR
SHEET CONTENT:	ELECTRICAL LAYOUT
SHEET NO.:	EL-08 16/29

1. ALL WORKS SHALL BE EXECUTED IN ACCORDANCE TO THE UNIFORM PLUMBING CODE OF THE PHILIPPINES, THE NATIONAL BUILDING CODE OF THE PHILIPPINES AND OTHER RELATED LAWS AND ORDINANCES OF THIS CITY.
2. ALL WORKS SHALL BE SUPERVISED BY A REGISTERED PROFESSIONAL RELATED TO THE ACTIVITIES BEING UNDERTAKEN
3. ALL WORKS SHALL BE COORDINATED WITH THE RESPECTIVE TRADES SO TO AVOID CONFLICTS DURING EXECUTION OF ACTIVITIES.
4. ALL NECESSARY PERMITS SHALL BE SECURED AND TURNED-OVER TO THE CITY.
5. ALL DRAWINGS AND SPECIFICATIONS SHALL BE CORRECTLY REVIEWED BY THE CONTRACTOR AND SHALL IMMEDIATELY BE INFORMED IF DISCREPANCY (IES) FOUND HEREIN.
6. ALL DIMENSIONS, ELEVATIONS AND REFERENCES SHALL BE VERIFIED WITH THE ACTUAL CONDITION PRIOR TO EXECUTION.
7. SHOP DRAWINGS SHALL BE PROVIDED AS NECESSARY PRIOR TO THE EXECUTION.
8. ALL WORKS SHALL BE TESTED AND COMMISSIONED AS INDICATED IN THE SPECIFICATION WITH THE PRESENCE OF ALL PARTIES INVOLVE. RESULT SHALL BE DOCUMENTED PROPERLY.
9. ALL PIPES AND LAY-OUT ARE ONLY DIAGRAMMATIC, ACTUAL LAYOUT OF PIPES AND FITTINGS, UNLESS OTHERWISE REQUIRED, SHALL BE PROPERLY CONCEALED.
10. NO PIPES SHALL BE ALLOWED TO BE EMBEDDED IN STRUCTURAL MEMBERS, UNLESS OTHERWISE APPROVED.
11. ALL PIPES, FITTINGS, EQUIPMENT AND FIXTURE SHALL PASS THE MINIMUM STANDARDS AS PER MATERIAL SPECIFICATION WITH THE SEAL OF APPROVAL BY THE DEPARTMENT OF TRADE AND INDUSTRY.
12. ALL PIPES, FITTINGS, EQUIPMENT AND FIXTURES SHALL BE INSTALLED IN ACCORDANCE TO MANUFACTURER'S SPECIFICATION AND INSTRUCTION.
13. SUPPORT AND HANGERS SHALL BE PROVIDED ACCORDINGLY.
14. ALL EQUIPMENT & FIXTURES SHALL BE ENVIRONMENTAL FRIENDLY (SUCH AS WATER EFFICIENT FIXTURES)
15. WATERLINE
    - 15.1. WATERLINE SHALL BE PPR TYPE.
    - 15.2. GATE VALVE SHALL BE PPR TYPE OR APPROVED EQUIVALENT.
    - 15.3. WATER METER SHALL BE ANY BRAND AND ACCEPTED BY THE WATER UTILITY COMPANIES.
    - 15.4. ALL WATER PIPES EXPOSED TO WEATHER CONDITIONS HALL BE MADE OF GI.
16. STORM DRAIN
    - 16.1. ALL STORM DRAINAGE SLOPE SHALL BE WITHIN 0.5% TO 4%.
    - 16.2. STORM DRAINAGE LINE 250MMD AND BLOW SHALL BE PVC, 250MMØ & ABOVE SHALL BE REINFORCED CONCRETE PIPE.
17. SEWER LINE
    - 17.1. ALL SLOPES FOR SANITARY SHALL CONFORM A 2% SLOPE.
    - 17.2. SOIL, WASTE, & VENT PIPE SHALL BE (POLYVINYL CHLORIDE) PVC OR THE APPROVED EQUAL.
    - 17.3. CLEAN OUTS MUST BE PROVIDED FOR SANITARY VERTICAL PIPES AND EACH HORIZONTAL PIPE SHALL BE PROVIDED WITH A CLEAN OUT AT ITS UPPER TERMINAL, EVERY CHANGE IN DIRECTION AND EVERY 30M OF A STRAIGHT PIPE. CLEANOUTS CAN BE OMITTED IF THE EFFECTIVE LENGTH IS LESS THAN 1.5M.
    - 17.4. ALL DRAINAGE FIXTURE SHALL BE SUPPLIED WITH APPROPRIATE VENTILATION.
18. FIXTURES
    - 18.1. WATER CLOSETS SHALL BE FREE STANDING TOILET COMBINATION, ROUND FRONT BOTTOM OUTLET SIPHON VORTEX OR WASH-DOWN BOWL WITH EXTENDED REAR SELF AND CLOSE COUPLED TANK WITH COVER COMPLETE WITH FITTING AND MOUNTING ACCESSORIES AND WATER EFFICIENT.
    - 18.2. LAVATORY SHALL BE VITREOUS CHINA, WALL HUNG WITH REAR OVERFLOW, POCKET HANGER WITH INTEGRAL CHINA BRACKET, COMPLETE WITH STAINLESS STEEL LEVER TYPE HEAVY DUTY FAUCET, SUPPLY PIPES, P-TRAP AND MOUNTING ACCESSORIES.
    - 18.3. URINAL SHALL BE VITREOUS CHINA, WALL HUNG WASH-OUT URINAL WITH EXTENDED SHIELDS AND INTEGRAL FLUSH SPREADER, CONCEALED WALL HANGER POCKETS, 19MM TOP SPUD COMPLETE FITTING AND MOUNTING ACCESSORIES, INCLUDING URINAL PARTITION.
    - 18.4. GRAB BARS SHALL BE PROVIDED ON ALL PWD TOILET AND SHALL BE MADE OF TUBULAR STAINLESS STEEL PIPE PROVIDED WITH SAFETY GRIP AND MOUNTING FLANGE.
    - 18.5. FLOOR DRAINS SHALL BE MADE OF STAINLESS BEEHIVE TYPE, MEASURING 100MM X 100MM AND PROVIDED WITH DETACHABLE STAINLESS STRAINER, EXPANDED METAL LATH TYPE.
    - 18.6. TOILET PAPER HOLDER SHALL BE VITREOUS CHINA WALL MOUNTED, COLOR SHALL RECONCILE WITH THE ADJACENT FIXTURE AND FACING TILES.
    - 18.7. SOAP HOLDER SHALL BE VITREOUS CHINA WALL MOUNTED, COLOR SHALL RECONCILE WITH THE ADJACENT FIXTURE AND FACING TILES.
    - 18.8. FAUCET SHALL BE MADE OF STAINLESS STEEL LEVER TYPE HEAVY DUTY FOR INTERIOR USE.
    - 18.9. HOSE BIBB SHALL BE MADE OF STAINLESS STEEL LEVER TYPE HEAVY DUTY.
    - 18.10. KITCHEN SINK FAUCET SHALL BE MADE OF STAINLESS STEEL LEVER TYPE HEAVY DUTY GOOSE NECK TYPE WITH COMPLETE ACCESSORIES.

1 GENERAL NOTES

SCALE NTS.

I. WATER DISTRIBUTION SYSTEM :		II. SEWER/ WASTE AND VENT SYSTEM :	
CWL	COLD WATER LINE	SP / WP	SOIL PIPE / WASTE PIPE
CWR/CWDF	COLD WATER RISER/DOWNFEED	VS / VP	VENT STACK / VENT PIPE
GV	GATE VALVE	DP	STORM DRAIN PIPE
CV	CHECK VALVE	DS	DRAINAGE STACK / DOWNSPOUT
UP	UNION PATENTE	SS	SOIL STACK
WM	WATER METER	FCO/ GCO	FLOOR CLEANOUT / GROUND CLEANOUT

III. FIXTURES AND OTHER LEGEND	
FD	FLOOR DRAIN
RD	ROOF DRAIN
SHO	SHOWER
WC	WATER CLOSET
LAV	LAVATORY
URI	URINAL
KS	KITCHEN SINK
GT	GREASE TRAP
FCO	FLOOR/GROUND CLEANOUT
DS	DOWNSPOUT
CB	CATCH BASIN

24-00063

2 LEGENDS AND SYMBOLS

SCALE NTS.

3 EQUIPMENT SCHEDULE

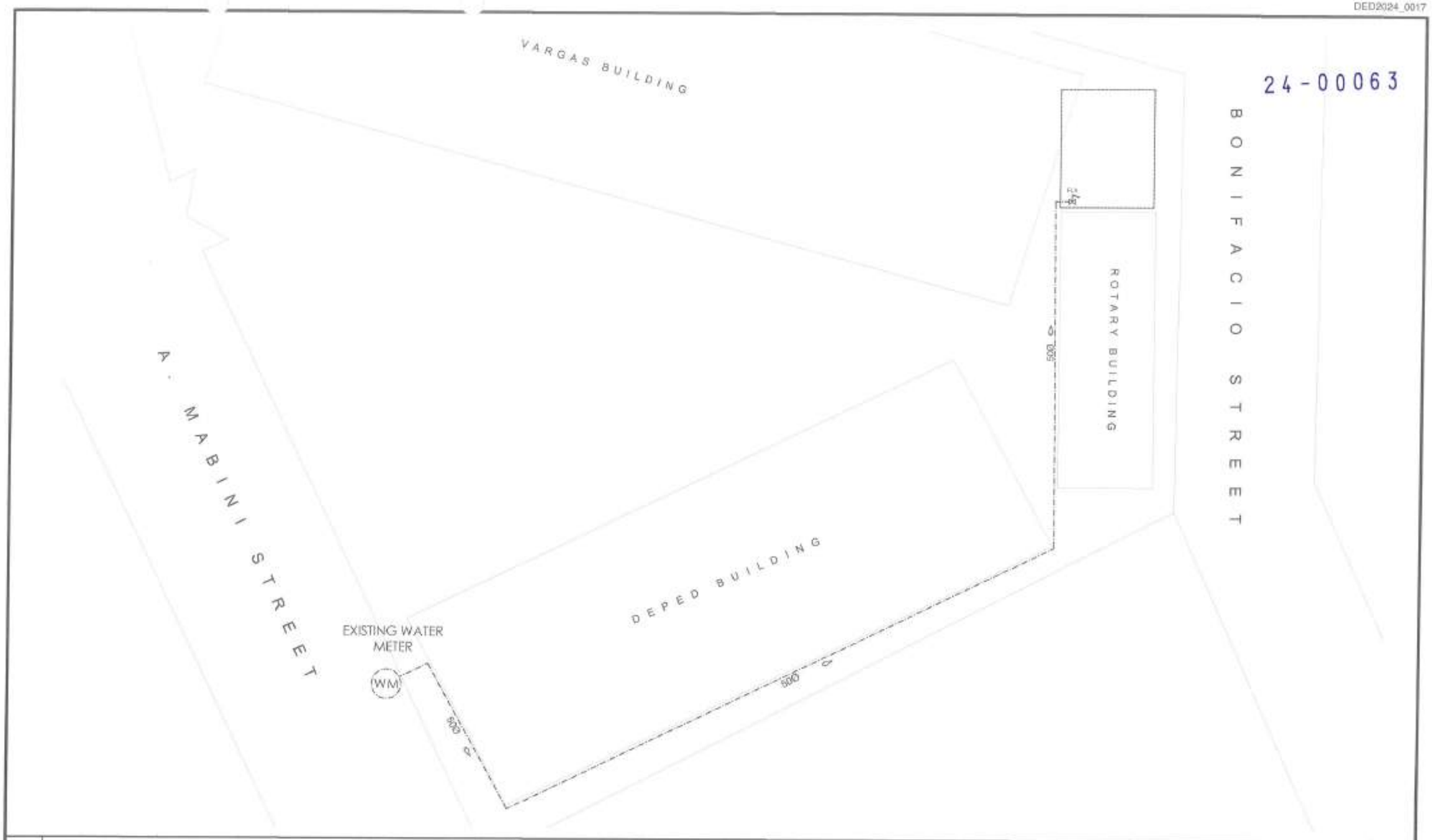
SCALE NTS.

DESIGNATION	QUANTITY	LOCATION	DESCRIPTION	REMARKS
PT 1	1	VARGAS BUILDING	**PRESSURE TANK**, STAINLESS STEEL, GAP14, 224 GALS CAPACITY COMPLETE WITH INLET PORT, DRAIN PORT, PRESSURE GAUGE AND PRESSURE SWITCH SET AT ▒ PSI CUT-IN/CUT-OFF PRESSURE.	LOCALLY FABRICATED AND FACTORY TESTED AT 150 PSI WORKING PRESSURE
PT 2	1	ROTARY BUILDING	**PRESSURE TANK,** STAINLESS STEEL, GAP14, 82 GALS CAPACITY COMPLETE WITH INLET PORT, DRAIN PORT, PRESSURE GAUGE AND PRESSURE SWITCH SET AT ▒ PSI CUT-IN/CUT-OFF PRESSURE.	LOCALLY FABRICATED AND FACTORY TESTED AT 150 PSI WORKING PRESSURE
WT 1	1	DEPED BUILDING	**WATER TANK,** STAINLESS STEEL CONSTRUCTION, ¼" THICK WITH A CAPACITY OF **845 GALLONS**, COMPLETE WITH MANHOLE LADDER RUNG, SADDLE STRAP, INLET PORT, OUTLET PORT, VENT, DRAIN PORT AND MANHOLE COVER, VERTICALLY INSTALLED	LOCALLY FABRICATED AND FACTORY TESTED AT 150 PSI WORKING PRESSURE
BP 1	2	VARGAS BUILDING	**BOOSTER PUMP**, CENTRIFUGALLY END-SUCTION, CAST-IRON CASING STAINLESS STEEL SHAFT, MECHANICAL SEAL, HARD PLASTIC IMPELLER, W/ A CAPACITY OF 55 GALLONS PER MINUTE AGAINST 185 FT. TOTAL DYNAMIC HEAD, CLOSE-COUPLED TO A 3.0 HP, 220, 1φ, 60HZ HIGH EFFICIENT MOTOR COMPLETE W/ ELECTRODES OVERHEAD TANK, ALTERNATOR AND OTHER ACCESSORIES NEEDED FOR AUTOMATIC AND PARALLEL OPERATION.	CONTRACTOR SUPPLY & INSTALL MOTOR SHALL BE US MADE OR APPROVED EQUAL
BP 2	1	ROTARY BUILDING	**BOOSTER PUMP**, CENTRIFUGALLY END-SUCTION, CAST-IRON CASING STAINLESS STEEL SHAFT, MECHANICAL SEAL, HARD PLASTIC IMPELLER, , W/ A CAPACITY OF 17 GALLONS PER MINUTE AGAINST 112 FT. TOTAL DYNAMIC HEAD, CLOSE-COUPLED TO A 0.75 HP, 220, 1φ, 60HZ HIGH EFFICIENT MOTOR COMPLETE W/ ELECTRODES OVERHEAD TANK, ALTERNATOR AND OTHER ACCESSORIES NEEDED FOR AUTOMATIC AND PARALLEL OPERATION.	CONTRACTOR SUPPLY & INSTALL MOTOR SHALL BE US MADE OR APPROVED EQUAL
TP 1	1	ROTARY BUILDING	TRANSFER PUMP, CENTRIFUGAL END-SUCTION, CAST-IRON CASING, HARD PLASTIC IMPELLER, STAINLESS STEEL SHAFT, MECHANICAL SEAL, HARD PLASTIC IMPELLER WITH A CAPACITY IT 100 GALLON PER MINUTE AGAINST 120 FT. TOTAL DYNAMIC HEAD, CLOSE COUPLED TO A 3.0 HP, 220V, 1φ, 60HZ HIGH EFFICIENT MOTOR. COMPLETE WITH CONTROLLER AND OTHER ACCESSORIES NEEDED FOR AUTOMATIC, PARALLEL OPERATION.	CONTRACTOR SUPPLY & INSTALL MOTOR SHALL BE US MADE OR APPROVED EQUAL

Republika ng Pilipinas
Lungsod ng Quezon
DEPARTMENT OF ENGINEERING
Quezon City Hall Bldg B, City Hall Compound, Elliptical Road, Diliman, Central 1100 Quezon City
Telefax: +63 2 8988 4242
E-mail address: engineering@quezoncity.gov.ph

PROJECT TITLE: PROPOSED UPGRADING OF ELECTRICAL SYSTEM AND WATER SYSTEM AT STA. LUCIA SENIOR HIGH SCHOOL LOCATION: BARANGAY STA LUCIA, DISTRICT V, QUEZON CITY	DATE: DESIGNED BY: DRAWN BY: VAV CHECKED BY: RJN REVISION NO.:	SUBMITTED BY: ENGR. FREDISWALDA BL. DE GUZMAN HEAD, PLANNING & DESIGN DIVISION	RECOMMENDING APPROVAL: ATTY. MARK DALE DIAMOND P. PERRAL CITY ENGINEER, QUEZON CITY	APPROVED BY: HON. MA. JOSEFINA G. BELMONTE CITY MAYOR	SHEET CONTENT: GENERAL NOTES LEGENDS AND SYMBOLS EQUIPMENT SCHEDULE	SHEET NO.: PL-01 17 29

24-00063

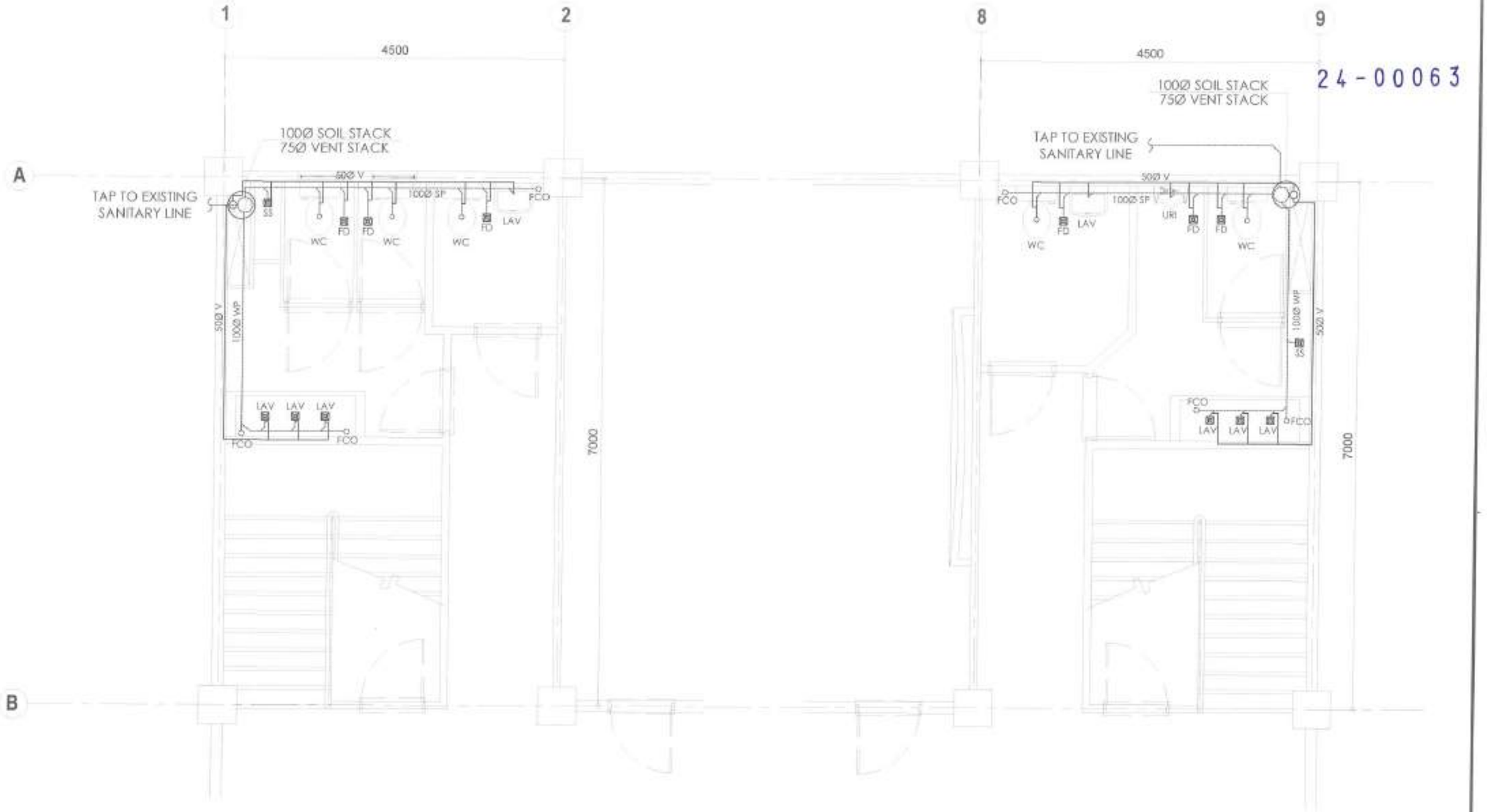


1 WATERLINE LAYOUT

Republika ng Pilipinas Lungsod ng Quezon DEPARTMENT OF ENGINEERING 5 Iris Street, Building III, City Hall Compound, Elliptical Road Diliman, Central 1100 Quezon City Telefax: +63 2 8988-4242 E-mail address: engineering@quezoncity.gov.ph	PROJECT TITLE: PROPOSED UPGRADING OF ELECTRICAL SYSTEM AND WATER SYSTEM AT STA. LUCIA SENIOR HIGH SCHOOL LOCATION: BARANGAY STA LUCIA, DISTRICT V, QUEZON CITY	DATE: DESIGNED BY: DRAWN BY: UAV CHECKED BY: RTV REVISION NO.:	SUBMITTED BY: ENGR. FREDISWINDA DE GUZMAN HEAD, PLANNING & DESIGN DIVISION	RECOMMENDING APPROVAL: ATTY. MARK DALE DIAMOND P. PERRAL CITY ENGINEER, QUEZON CITY	APPROVED BY: HON. MA. JOSEFINA G. BELMONTE CITY MAYOR	SHEET CONTENT: WATERLINE LAYOUT	SHEET NO.: PL-02 18 29

DED2024_0017

24-00063



1 VARGAS BUILDING -GROUND FLOOR PLUMBING LAYOUT

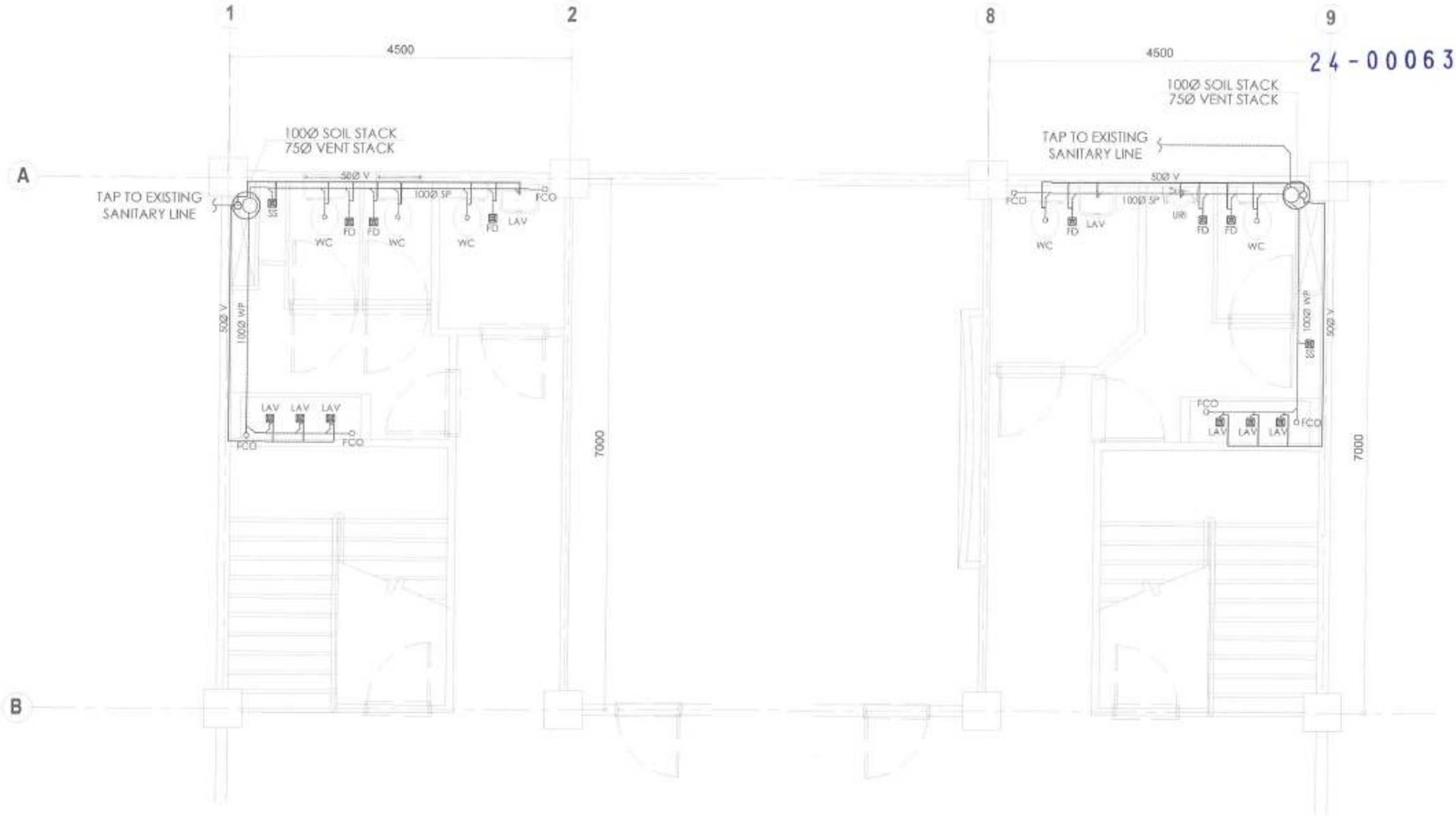
SCALE: 1:100 MTS

Republika ng Pilipinas
Lungsod ng Quezon
DEPARTMENT OF ENGINEERING

PROJECT TITLE: PROPOSED UPGRADING OF ELECTRICAL SYSTEM AND WATER SYSTEM AT STA. LUCIA SENIOR HIGH SCHOOL LOCATION: BARANGAY STA.LUCIA, DISTRICT V, QUEZON CITY	DATE: DESIGNED BY: DRAWN BY: VMV CHECKED BY: REVISION NO.:	SUBMITTED BY: ENGR. FREDISWINDA DL. DE GUZMAN HEAD - PLANNING & DESIGN DIVISION	RECOMMENDING APPROVAL: ATTY. MARK DALE DIAMOND P. PERRAL CITY ENGINEER, QUEZON CITY	APPROVED BY: HON. MA. JOSEFINA G. BELMONTE CITY MAYOR	SHEET CONTENT: VARGAS BUILDING -GROUND FLOOR PLUMBING LAYOUT	SHEET NO.: PL-03 19 29

DED2024_0017

24-00063



1 VARGAS BUILDING -SECOND FLOOR PLUMBING LAYOUT

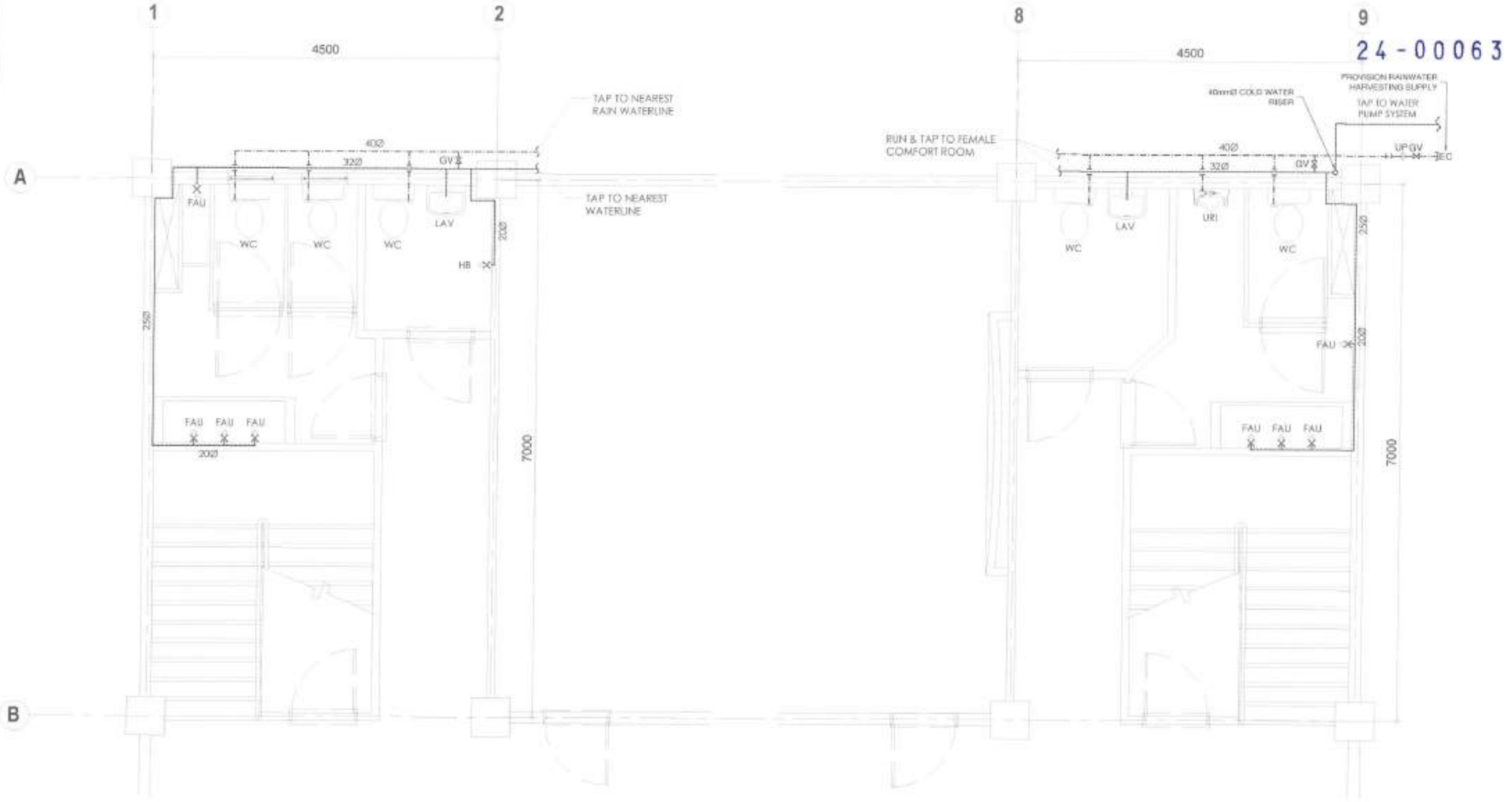
SCALE: 1:100 MTS

Republika ng Pilipinas
Lungsod ng Quezon
DEPARTMENT OF ENGINEERING
Civic Center Building 5, City Hall Compound, Elliptical Road
Diliman, Central 1100 Quezon City
Trunkline: +63 2 8988 4242
E-mail address: engineering@quezoncity.gov.ph

PROJECT TITLE:	DATE:	SUBMITTED BY:	RECOMMENDING APPROVAL:	APPROVED BY:	SHEET CONTENT	SHEET NO.
PROPOSED UPGRADING OF ELECTRICAL SYSTEM AND WATER SYSTEM AT STA. LUCIA SENIOR HIGH SCHOOL	DESIGNED BY: DRAWN BY: CHECKED BY:	ENGR. FREDISWINDO M. DE GUZMAN HEAD, PLANNING & DESIGN DIVISION	ATTY. MARK DALE DIAMOND P. PERRAL CITY ENGINEER, QUEZON CITY	HON. MA. JOSEFINA G. BELMONTE CITY MAYOR	VARGAS BUILDING -SECOND FLOOR PLUMBING LAYOUT	PL-04 20 29
LOCATION: BARANGAY STA.LUCIA, DISTRICT V, QUEZON CITY	REVISION NO.:					

DED2024_0017

24-00063



1 VARGAS BUILDING -GROUND FLOOR WATERLINE LAYOUT

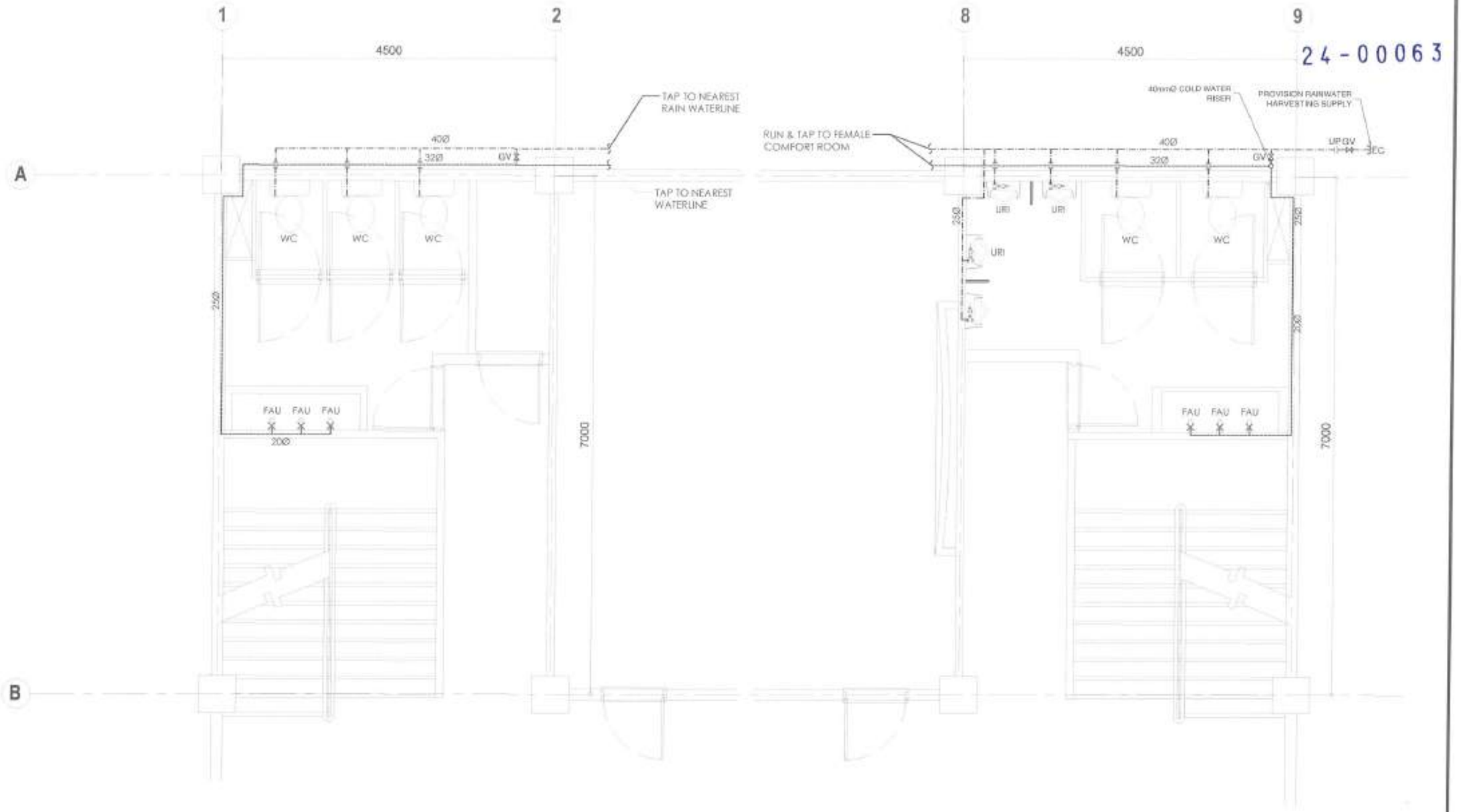
SCALE: 1:100 MTS

Republika ng Pilipinas
Lungsod ng Quezon
DEPARTMENT OF ENGINEERING
Civic Center Building B, City Hall Compound, Elliptical Road
Diliman, 1100 Quezon City
Telefax: +63 2 8988 4312
E-mail address: engineering@quezoncity.gov.ph

PROJECT TITLE: PROPOSED UPGRADING OF ELECTRICAL SYSTEM AND WATER SYSTEM AT STA. LUCIA SENIOR HIGH SCHOOL LOCATION: BARANGAY STA.LUCIA, DISTRICT V, QUEZON CITY	DATE: DESIGNED BY: DRAWN BY: VAV CHECKED BY: RVN REVISION NO.:	SUBMITTED BY: ENGR. FREDISWINDA OL. DE GUZMAN HEAD , PLANNING & DESIGN DIVISION	RECOMMENDING APPROVAL: ATTY. MARK DALE DIAMOND P. PERRAL CITY ENGINEER, QUEZON CITY	APPROVED BY: HON. MA. JOSEFINA G. BELMONTE CITY MAYOR	SHEET CONTENT: VARGAS BUILDING -GROUND FLOOR WATERLINE LAYOUT	SHEET NO.: PL-05 21 29

DED2024_0017

24-00063



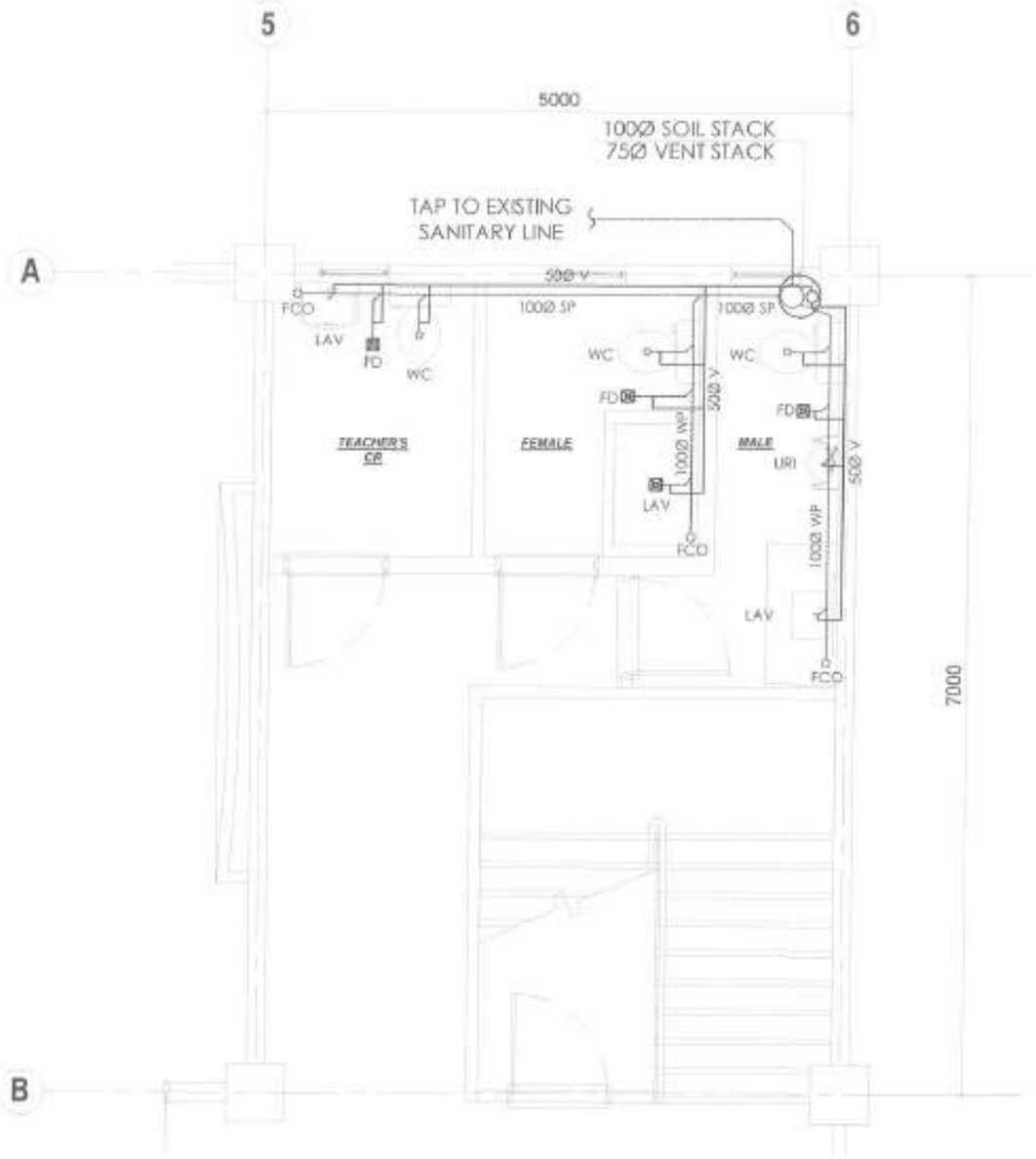
1 VARGAS BUILDING -SECOND FLOOR WATERLINE LAYOUT

SCALE: 1:100 MTS

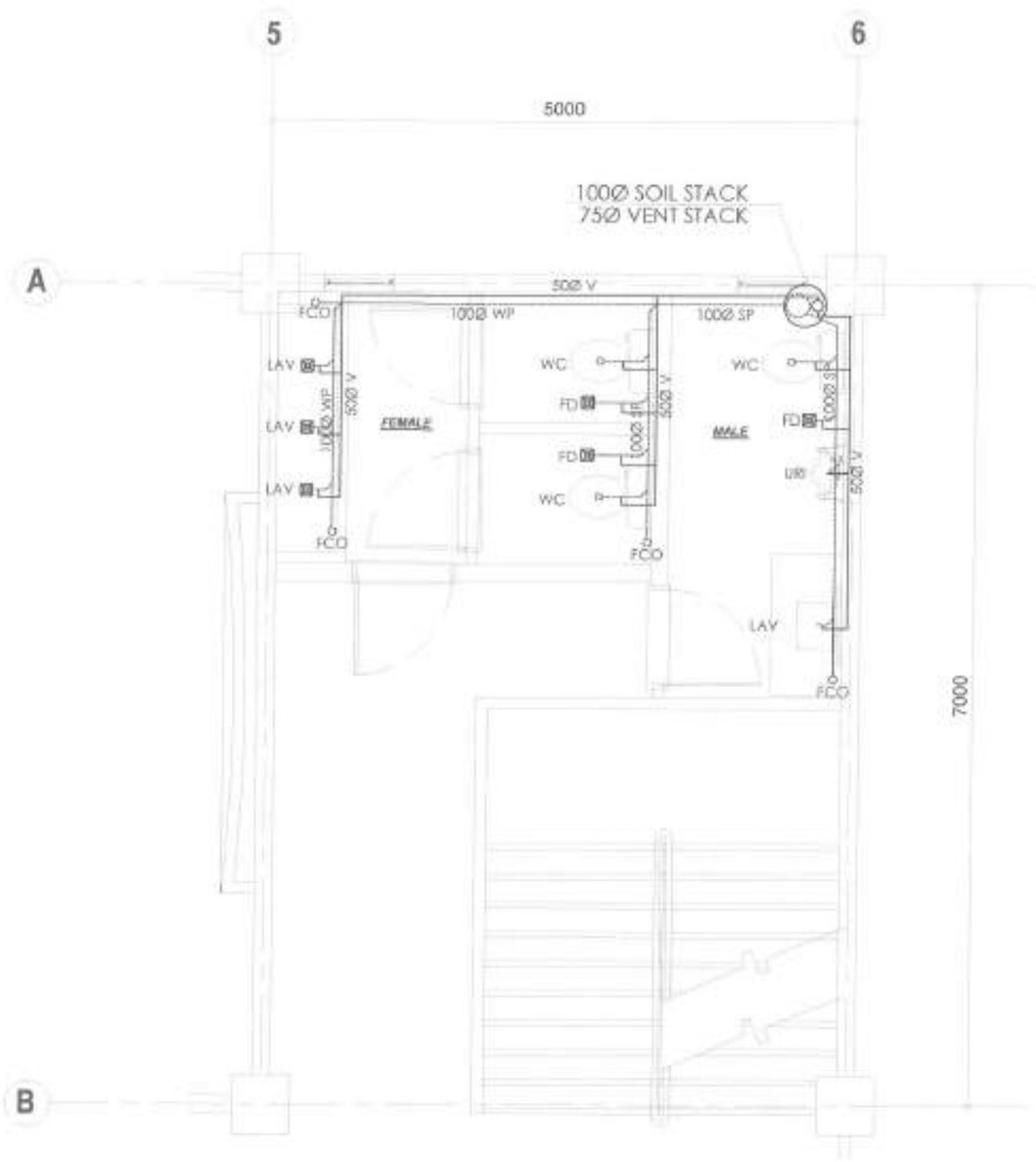
Republika ng Pilipinas
Lungsod ng Quezon
DEPARTMENT OF ENGINEERING
Civic Center Building R, City Hall Compound, Elliptical Road
Diliman, Central 1100 Quezon City
Trunkline: +63 2 8988 4242
E-mail address: engineering@quezoncity.gov.ph

PROJECT TITLE: PROPOSED UPGRADING OF ELECTRICAL SYSTEM AND WATER SYSTEM AT STA. LUCIA SENIOR HIGH SCHOOL LOCATION: BARANGAY STA.LUCIA, DISTRICT V, QUEZON CITY	DATE: DESIGNED BY: DRAWN BY: YAU CHECKED BY: FRDN REVISION NO.:	SUBMITTED BY: ENGR. FREDISWINDO DL. DE GUZMAN, HEAD, PLANNING & DESIGN DIVISION	RECOMMENDING APPROVAL: ATTY. MARK DALE DIAMOND P. PERRAL, CITY ENGINEER, QUEZON CITY	APPROVED BY: HON. MA. JOSEFINA G. BELMONTE, CITY MAYOR	SHEET CONTENT: VARGAS BUILDING -SECOND FLOOR WATERLINE LAYOUT	SHEET NO.: PL-06 / 2229

24-00063



1 **DEPED BUILDING -GROUND FLOOR PLUMBING LAYOUT** SCALE: 1:300 MTS



2 **DEPED BUILDING -SECOND FLOOR PLUMBING LAYOUT** SCALE: 1:300 MTS

Republika ng Pilipinas
Lungsod ng Quezon
DEPARTMENT OF ENGINEERING
Civic Center Building B, City Hall Compound, Elliptical Road
Diliman, Central 1100 Quezon City
Telefono: +63 2 8988-4242
E-mail Address: engineering@quezoncity.gov.ph

PROJECT TITLE:
PROPOSED UPGRADING OF
ELECTRICAL SYSTEM
AND WATER SYSTEM
AT STA. LUCIA SENIOR HIGH SCHOOL

LOCATION:
BARANGAY STA.LUCIA, DISTRICT V, QUEZON CITY

DATE:
DESIGNED BY:
DRAWN BY: VAV
CHECKED BY: RDV
REVISION NO.:

SUBMITTED BY:
ENGR. FREDISWINDA C. DE GUZMAN
HEAD , PLANNING & DESIGN DIVISION

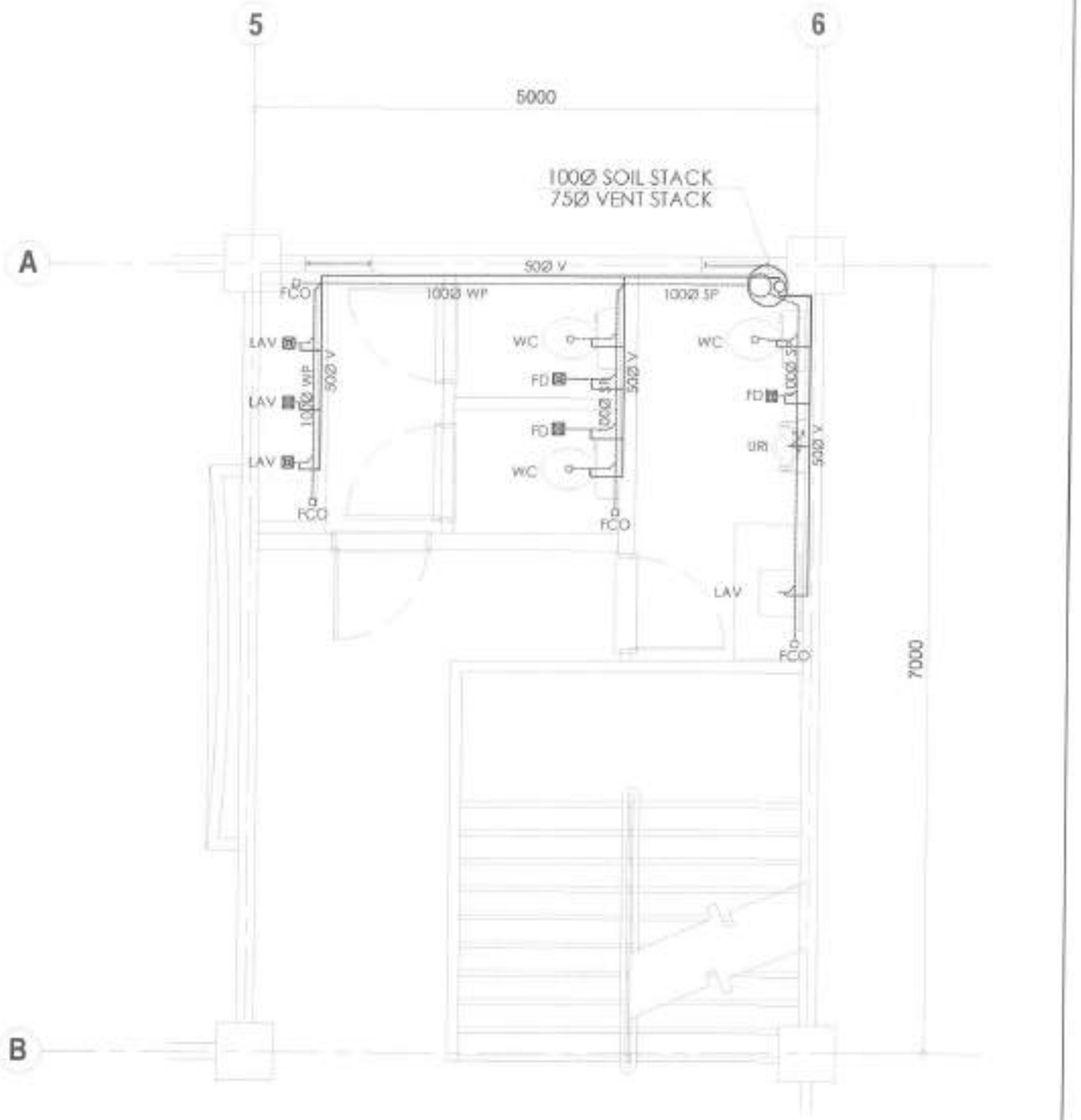
RECOMMENDING APPROVAL:
ATTY. MARK DALE DIAMOND P. PERRAL
CITY ENGINEER, QUEZON CITY

APPROVED BY:
HON. MA. JOSEFINA G. BELMONTE
CITY MAYOR

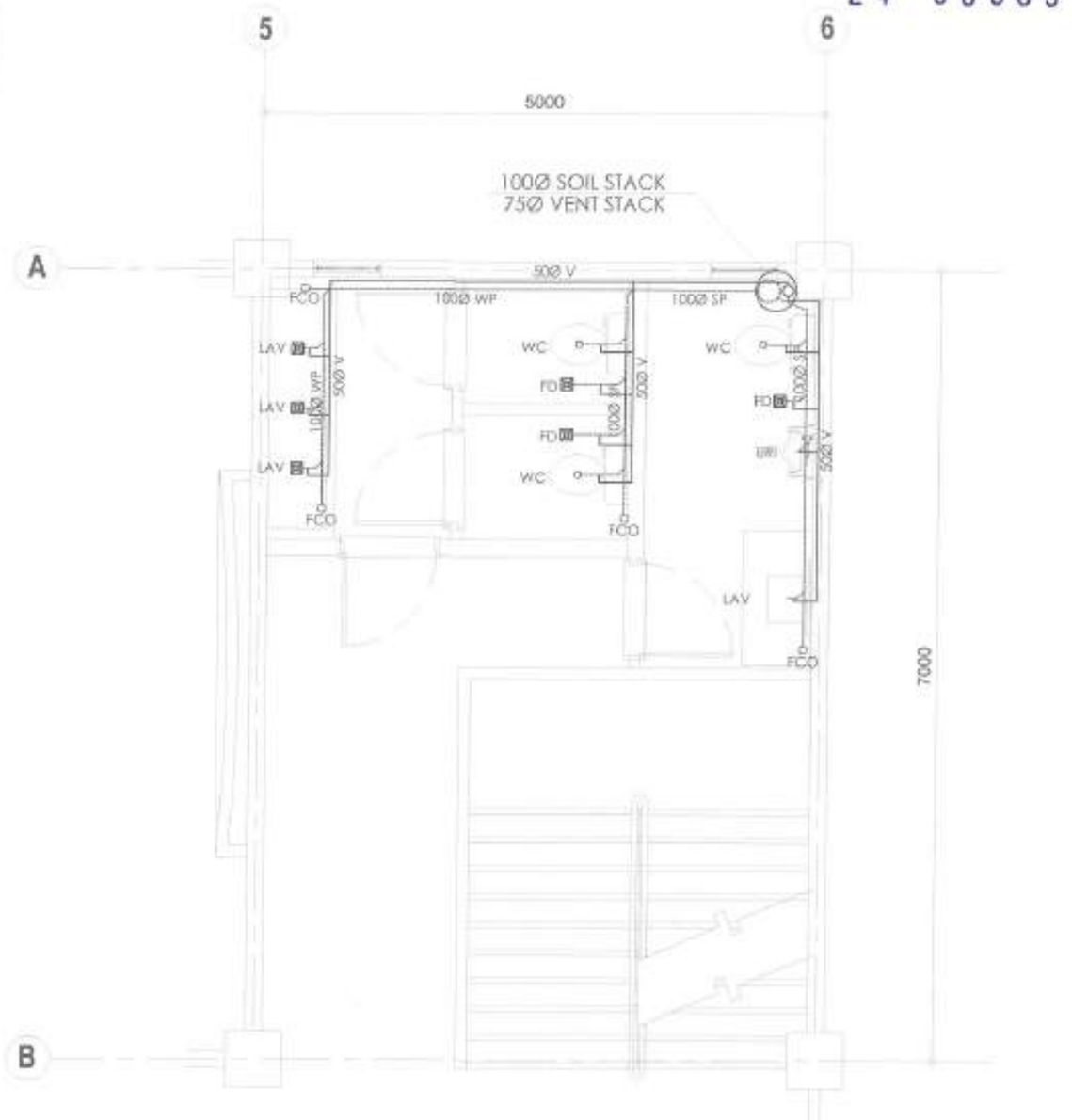
SHEET CONTENT:
DEPED BUILDING -GROUND FLOOR PLUMBING LAYOUT
DEPED BUILDING -SECOND FLOOR PLUMBING LAYOUT

SHEET NO.:
PL-07
23 29

24-00063



1 **DEPED BUILDING -THIRD FLOOR PLUMBING LAYOUT** SCALE: 1:300 MTS



2 **DEPED BUILDING -FOURTH FLOOR PLUMBING LAYOUT** SCALE: 1:300 MTS

Republika ng Pilipinas
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Civic Center Building III, City Hall Compound, Elliptical Road
Diliman, Cubao 1100, Quezon City
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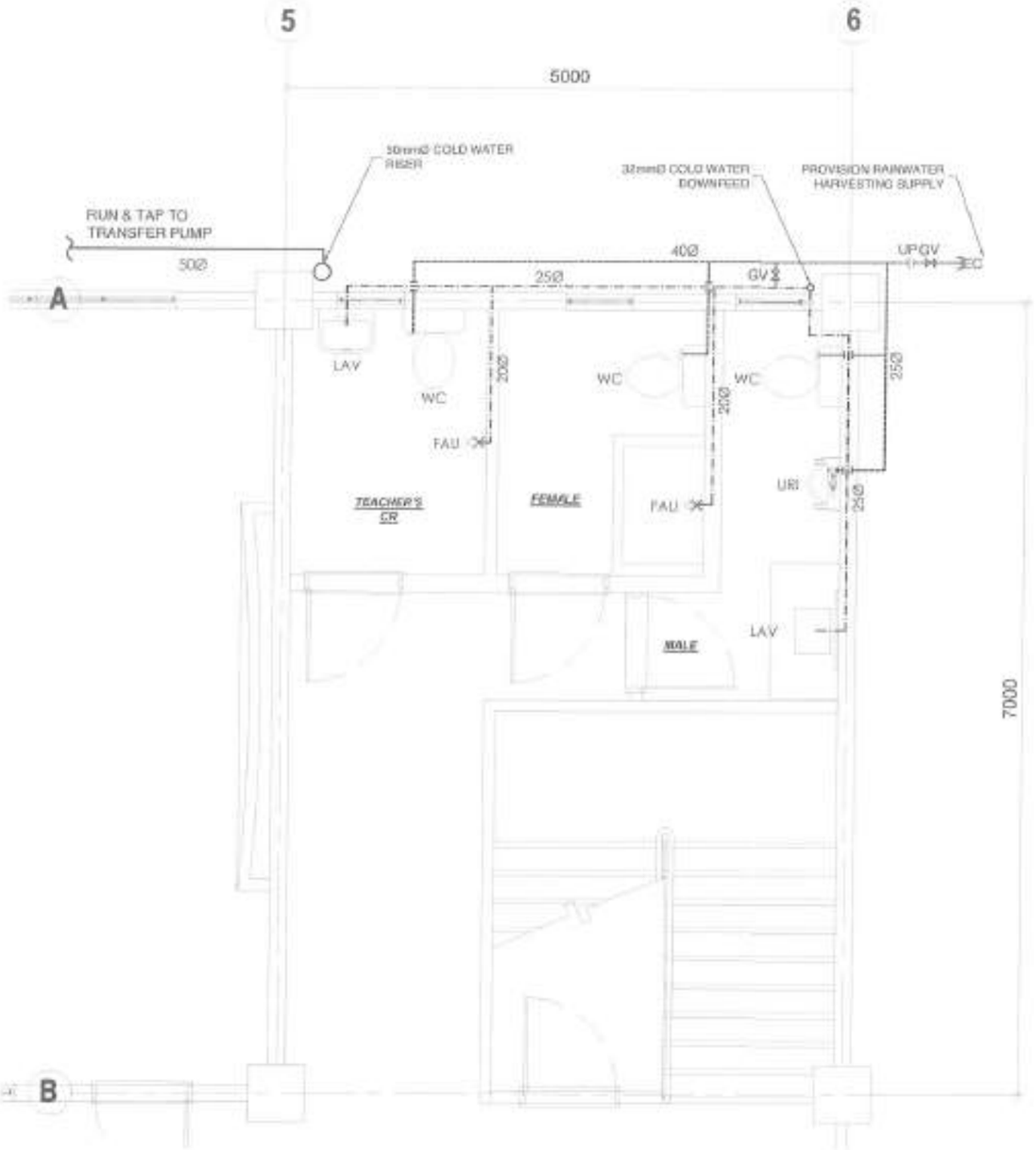
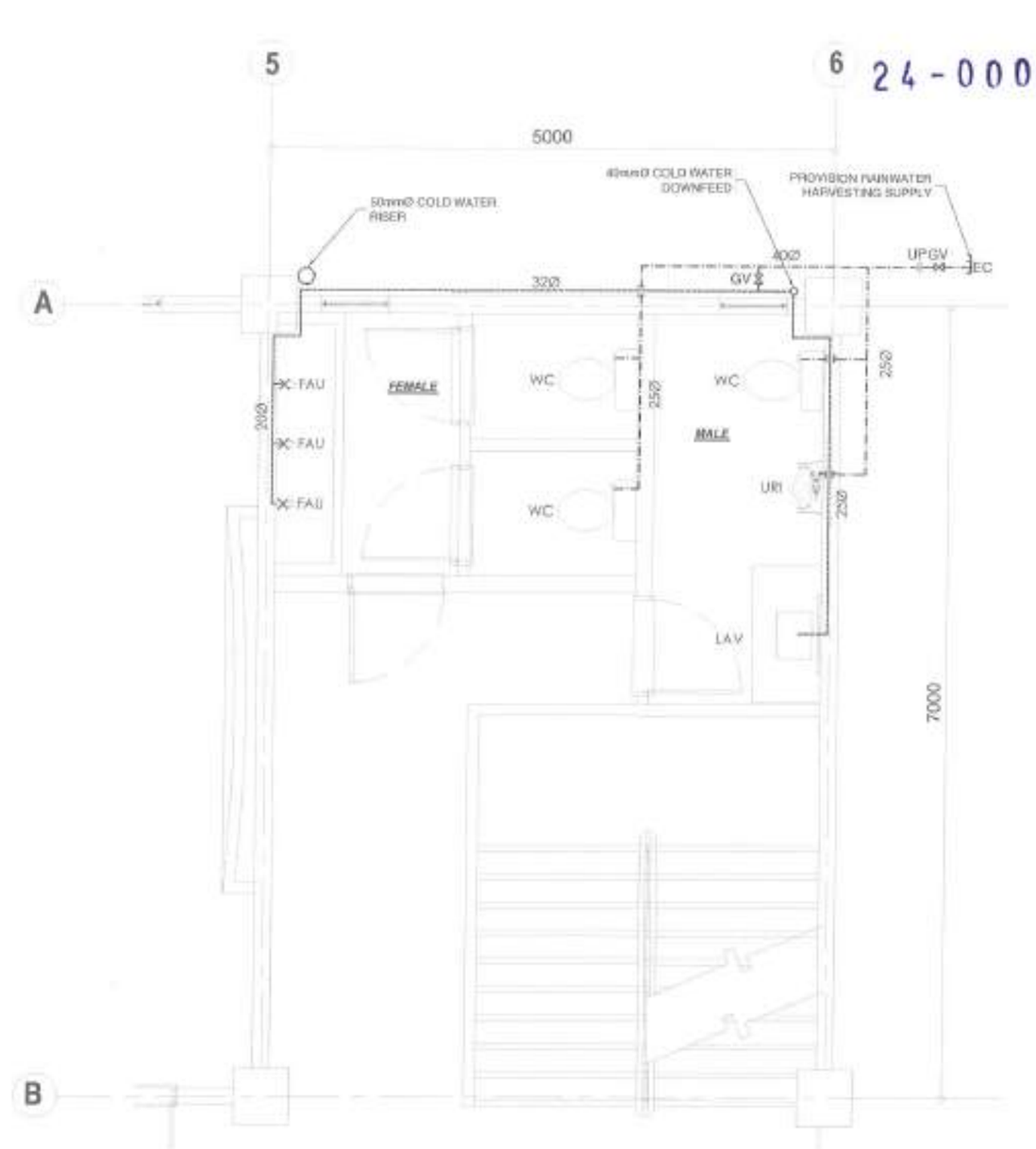
E-mail address: engineering@quezoncity.gov.ph

PROJECT TITLE: PROPOSED UPGRADING OF ELECTRICAL SYSTEM AND WATER SYSTEM AT STA. LUCIA SENIOR HIGH SCHOOL LOCATION: BARANGAY STA.LUCIA, DISTRICT V, QUEZON CITY	DATE: DESIGNED BY: DRAWN BY: VAV CHECKED BY: RMN REVISION NO:	SUBMITTED BY: ENGR. FREDISWINDA D.C. DE GUZMAN HEAD , PLANNING & DESIGN DIVISION	RECOMMENDING APPROVAL: ATTY. MARK DALE DIAMOND P. PERRAL CITY ENGINEER, QUEZON CITY	APPROVED BY: HON. MA. JOSEFINA G. BELMONTE CITY MAYOR	SHEET CONTENT: DEPED BUILDING -THIRD FLOOR PLUMBING LAYOUT DEPED BUILDING -FOURTH FLOOR PLUMBING LAYOUT	SHEET NO. PL-08 24 29

24-00063



1 **DEPED BUILDING -GROUND FLOOR WATERLINE LAYOUT** SCALE: 1:300 MTS



2 **DEPED BUILDING -SECOND FLOOR WATERLINE LAYOUT** SCALE: 1:300 MTS

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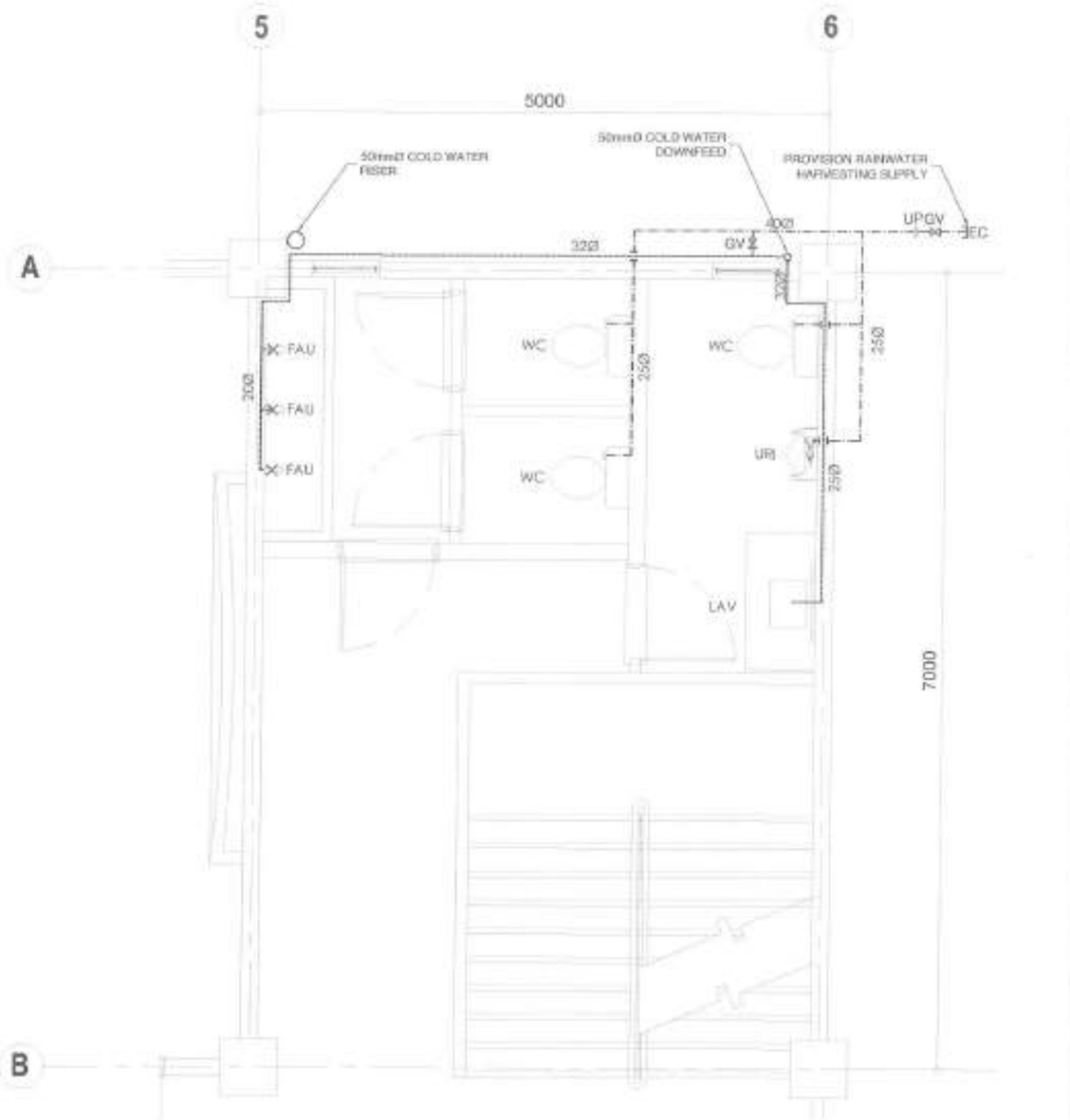
Lungsod ng Quezon
DEPARTMENT OF ENGINEERING
Civic Center Building B, City Hall Compound, Elliptical Road
Diliman, Central 1100, Quezon City
Trunkline: +63 2 8982-4040
E-mail address: engineering@quezoncity.gov.ph

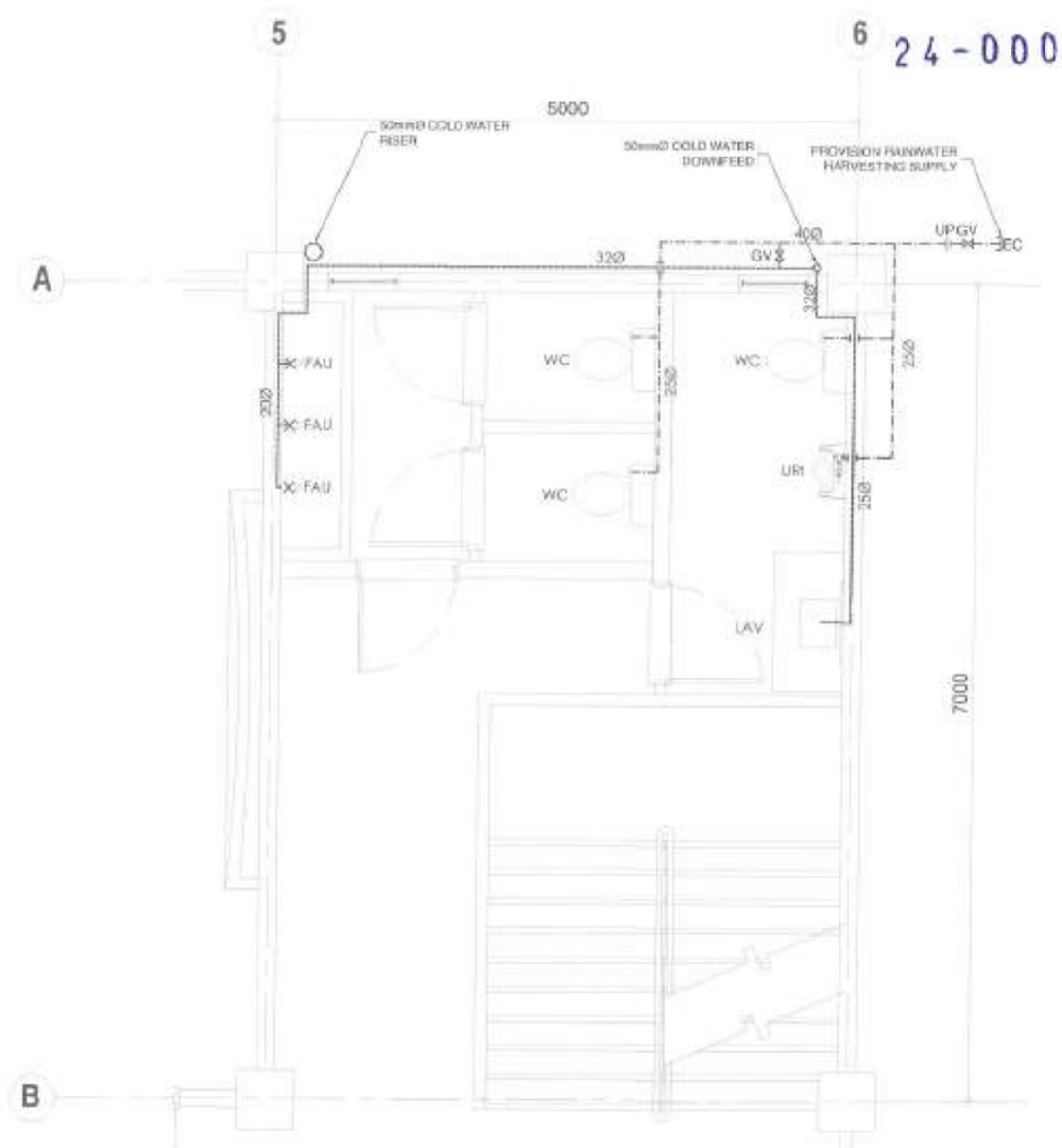
PROJECT TITLE:	PROPOSED UPGRADING OF ELECTRICAL SYSTEM AND WATER SYSTEM AT STA. LUCIA SENIOR HIGH SCHOOL
LOCATION:	BARANGAY STA.LUCIA, DISTRICT V, QUEZON CITY
DATE:	
DESIGNED BY:	
DRAWN BY:	VAV
CHECKED BY:	RMN
REVISION NO.:	
SUBMITTED BY:	ENGR. FREDISWINDA DL. DE GUZMAN, HEAD , PLANNING & DESIGN DIVISION
RECOMMENDING APPROVAL:	ATTY. MARK DALE DIAMOND P. PERRAL, CITY ENGINEER, QUEZON CITY
APPROVED BY:	HON. MA. JOSEFINA G. BELMONTE, CITY MAYOR
SHEET CONTENT	DEPED BUILDING -GROUND FLOOR WATERLINE LAYOUT DEPED BUILDING -SECOND FLOOR WATERLINE LAYOUT
SHEET NO.	PL-09 25|29

24-00063



1 DEPED BUILDING -THIRD FLOOR WATERLINE LAYOUT

SCALE: 1:300 MTS



2 DEPED BUILDING -FOURTH FLOOR WATERLINE LAYOUT

SCALE: 1:300 MTS

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Lungsod ng Quezon
DEPARTMENT OF ENGINEERING
Civic Center Building B, City Hall Compound, Elliptical Road
Diliman, Central 1100 Quezon City
Trunk Line: +63 2 8988 4242
E-mail address: engineering@quezoncity.gov.ph

PROJECT TITLE: PROPOSED UPGRADING OF ELECTRICAL SYSTEM AND WATER SYSTEM AT STA. LUCIA SENIOR HIGH SCHOOL	DATE:	SUBMITTED BY:	SHEET CONTENT: DEPED BUILDING -THIRD FLOOR WATERLINE LAYOUT; DEPED BUILDING -FOURTH FLOOR WATERLINE LAYOUT
LOCATION: BARANGAY STA.LUCIA, DISTRICT V, QUEZON CITY	DESIGNED BY: DRAWN BY: VMV CHECKED BY: FGN	ENGR. FREDISWINDA DL. DE GUZMAN, HEAD, PLANNING & DESIGN DIVISION	SHEET NO.: PL-10 26/29
REVISION NO.:	RECOMMENDING APPROVAL: ATTY. MARK DALE DIAMOND P. PERRAL, CITY ENGINEER, QUEZON CITY	APPROVED BY: HON. MA. JOSEFINA G. BELMONTE, CITY MAYOR	

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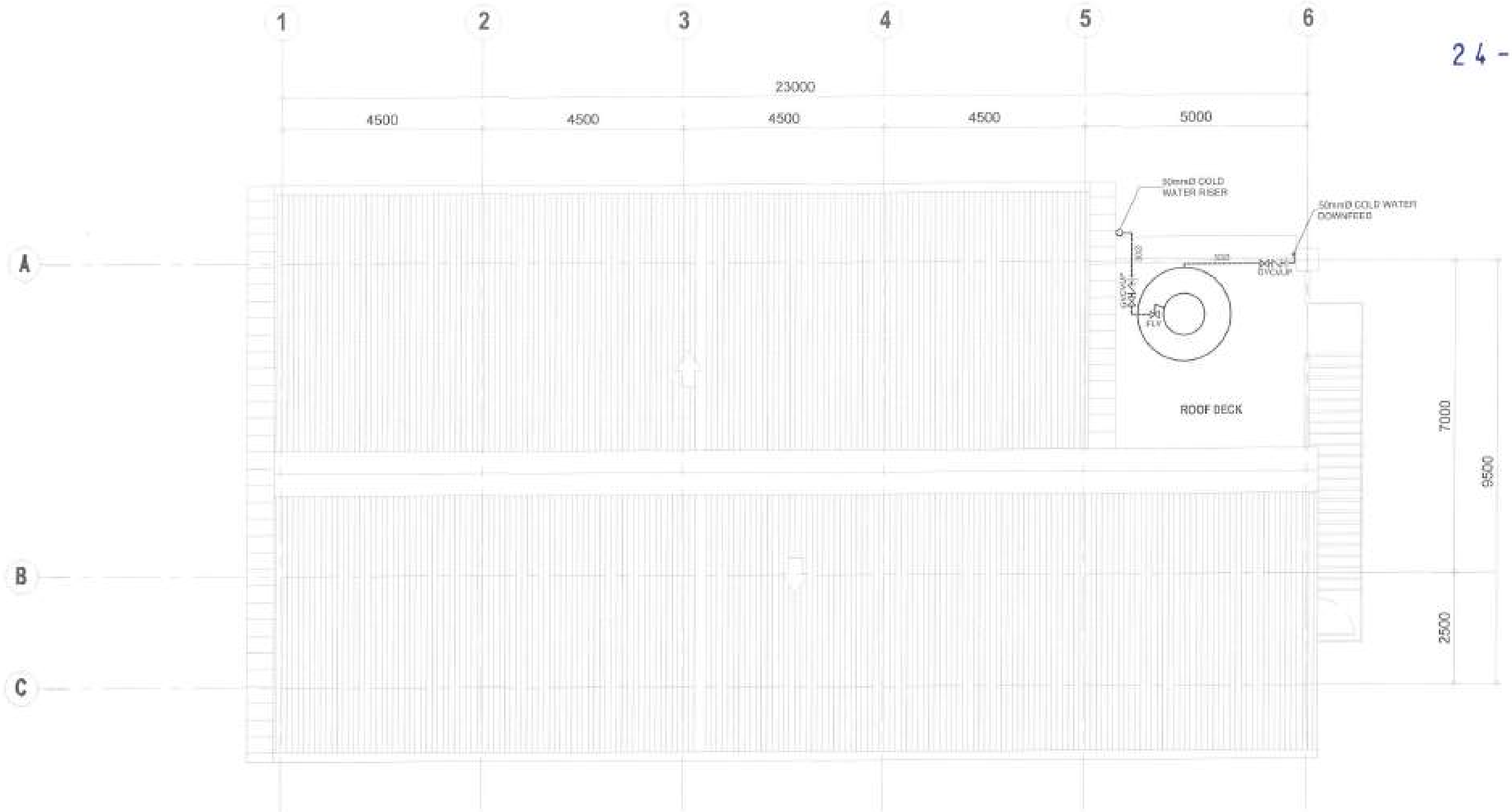


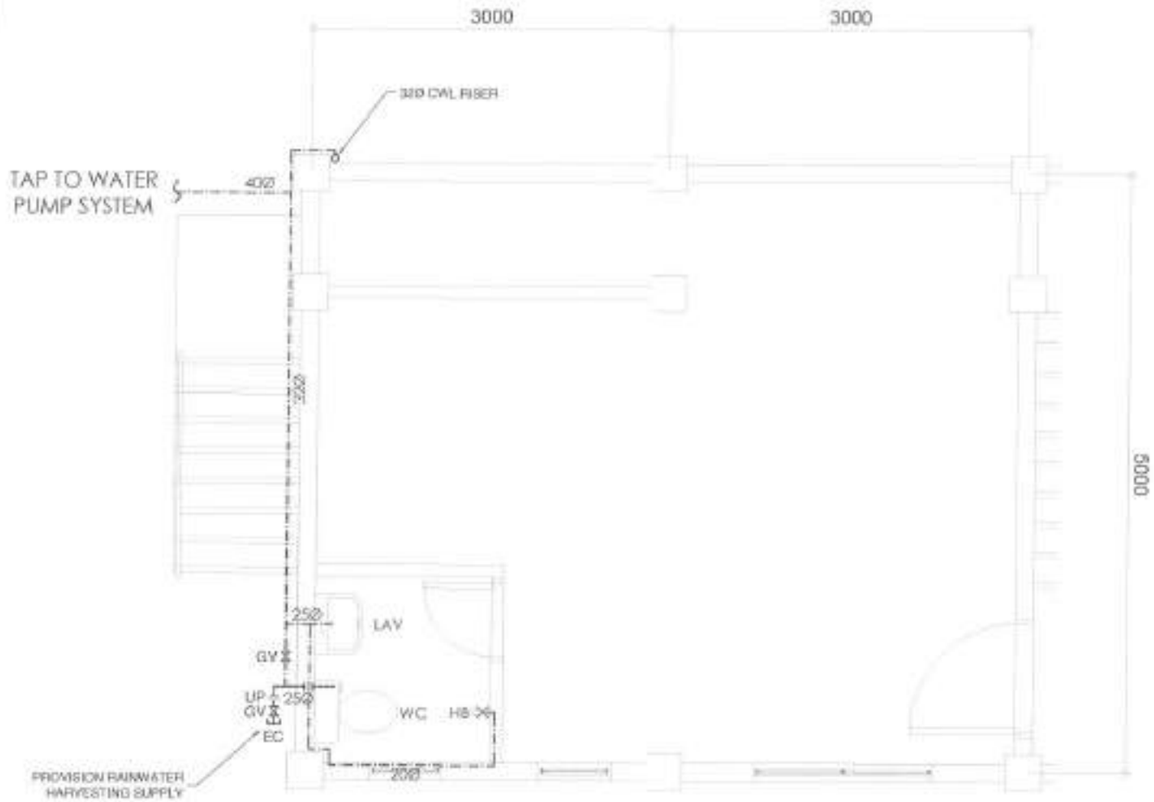
1 DEPED BILDING -WATERTANK LAYOUT

SCALE: 1:100 MTS

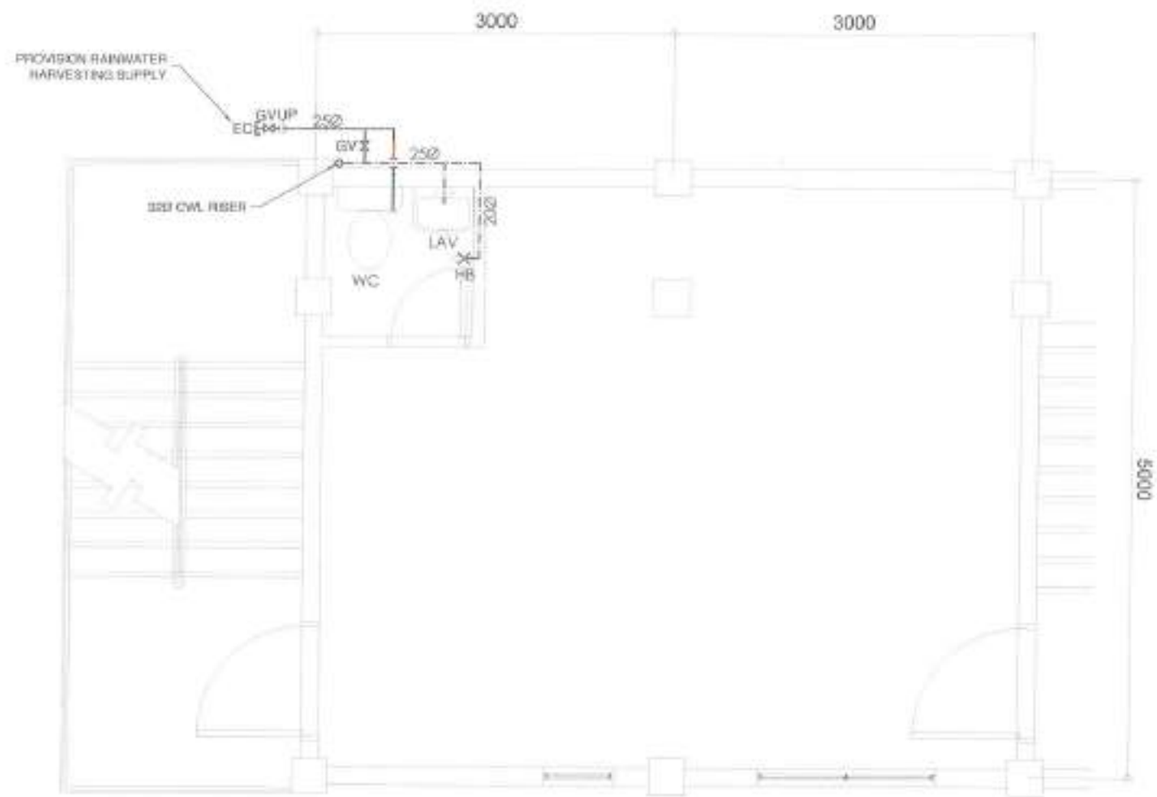
Republic Pilipinas Lungsod Quezon DEPARTMENT OF ENGINEERING	PROJECT TITLE : PROPOSED UPGRADING OF ELECTRICAL SYSTEM AND WATER SYSTEM AT STA. LUCIA SENIOR HIGH SCHOOL LOCATION: BARANGAY STA.LUCIA, DISTRICT V, QUEZON CITY	DATE: DESIGNED BY: DRAWN BY: CHECKED BY: REVISION NO.:	SUBMITTED BY: ENGR. FREDISWINDA DL. DE GUZMAN HEAD, PLANNING & DESIGN DIVISION	RECOMMENDING APPROVAL: ATTY. MARK DALE DIAMOND P. PERRAL CITY ENGINEER, QUEZON CITY	APPROVED BY: HON. MA. JOSEFINA G. BELMONTE CITY MAYOR	SHEET CONTENT DEPED BUILDING -WATERTANK LAYOUT

SHEET NO.
PL-011
27 29

24-00063



GROUND FLOOR PLAN



SECOND FLOOR PLAN

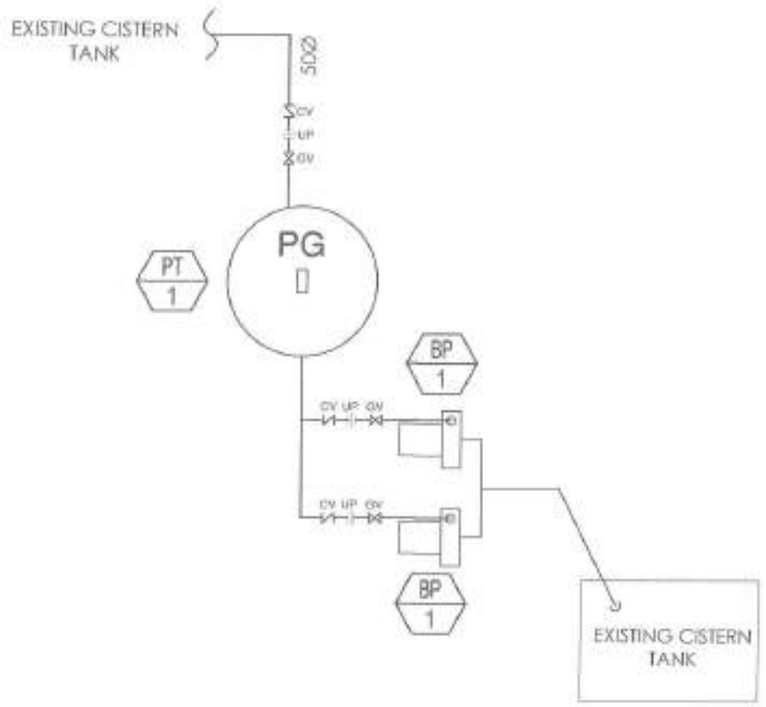
1 ROTARY BUILDING WATERLINE LAYOUT

SCALE: 1:200 MTS

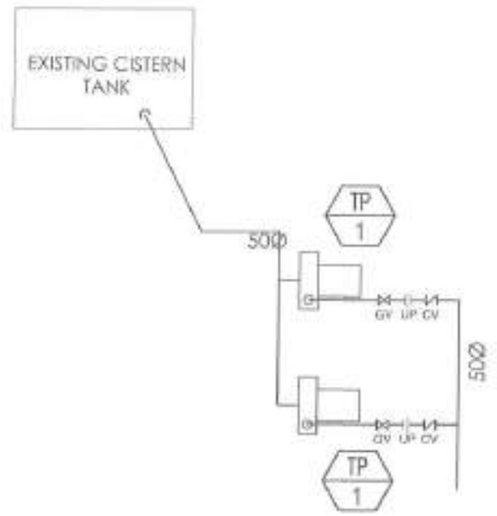
Republika ng Pilipinas
Lungsod ng Quezon
DEPARTMENT OF ENGINEERING
Zone Seven Building B, City Hall Compound, Elliptical Road
Diliman, Central 1100, Quezon City
Telefax: +63 2 8988 4242
E-mail address: engineering@quezoncity.gov.ph

PROJECT TITLE: PROPOSED UPGRADING OF ELECTRICAL SYSTEM AND WATER SYSTEM AT STA. LUCIA SENIOR HIGH SCHOOL LOCATION: BARANGAY STA LUCIA, DISTRICT V, QUEZON CITY	DATE: DESIGNED BY: DRAWN BY: AAV CHECKED BY: RD REVISION NO.:	SUBMITTED BY: ENGR. FREDISENDA OL. DE GUZMAN HEAD, PLANNING & DESIGN DIVISION	RECOMMENDING APPROVAL: ATTY. MARK DALE DIAMOND P. PERRAL CITY ENGINEER, QUEZON CITY	APPROVED BY: HON. MA. JOSEFINA G. BELMONTE CITY MAYOR	SHEET CONTENT: ROTARY BUILDING WATERLINE LAYOUT	SHEET NO.: PL-12 28 29

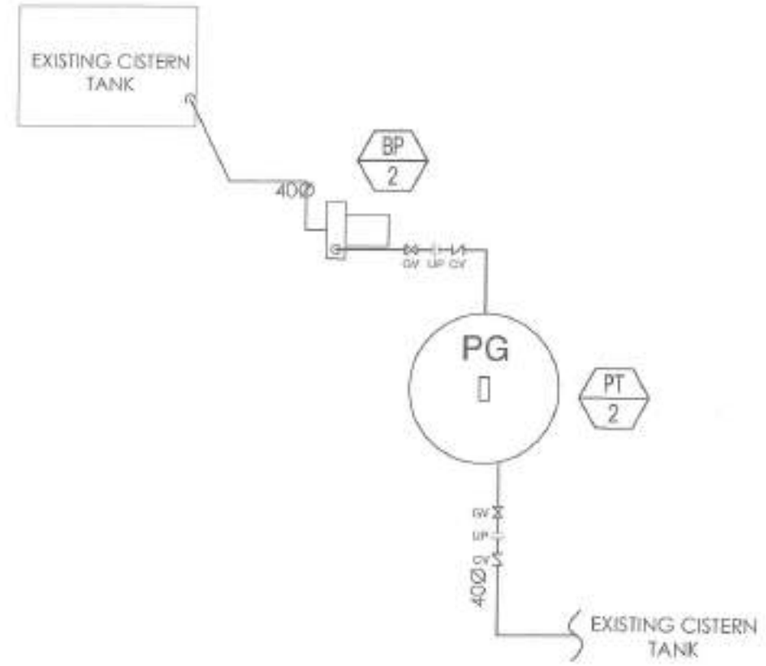
24-00063



VARGAS BUILDING



DEPED BUILDING



ROTARY BUILDING

1 WATER PUMP SYSTEM

SCALE: NTS

Republika ng Pilipinas
Lungsod ng Quezon
DEPARTMENT OF ENGINEERING

PROJECT TITLE:
PROPOSED UPGRADING OF ELECTRICAL SYSTEM AND WATER SYSTEM AT STA. LUCIA SENIOR HIGH SCHOOL

LOCATION:
BARANGAY STA.LUCIA, DISTRICT V, QUEZON CITY

DATE:
DESIGNED BY:
DRAWN BY: JAV
CHECKED BY:
REVISION NO.:

SUBMITTED BY:
ENGR. FREDISWINDA DL. DE GUZMAN
HEAD, PLANNING & DESIGN DIVISION

RECOMMENDING APPROVAL:
ATTY. MARK DALE DIAMOND P. PERRAL
CITY ENGINEER, QUEZON CITY

APPROVED BY:
HON. MA. JOSEFINA G. BELMONTE
CITY MAYOR

SHEET CONTENT:
WATER PUMP SYSTEM

SHEET NO.
PL-13
29|29

Section VIII. Bill of Quantities

Notes on the Bill of Quantities

Objectives

The objectives of the Bill of Quantities are:

a. to provide sufficient information on the quantities of Works to be performed to enable Bids to be prepared efficiently and accurately; and

b. when a Contract has been entered into, to provide a priced Bill of Quantities for use in the periodic valuation of Works executed.

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

Daywork Schedule

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

a. A list of the various classes of labor, materials, and Constructional Plant for which basic daywork rates or prices are to be inserted by the Bidder, together with a statement of the conditions under which the Contractor will be paid for work executed on a daywork basis.

b. Nominal quantities for each item of Daywork, to be priced by each Bidder at Daywork rates as Bid. The rate to be entered by the Bidder against each basic Daywork item should include the Contractor's profit, overheads, supervision, and other charges.

Provisional Sums

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

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

Signature Box

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

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

PROJECT TITLE : **PROPOSED UPGRADING OF ELECTRICAL SYSTEM AND WATER SYSTEM AT STA. LUCIA SENIOR HIGH SCHOOL**

LOCATION : **BARANGAY STA. LUCIA, DISTRICT 5, QUEZON CITY**

PROJECT NO. : **24 - 00063**

DURATION : **One Hundred Twenty (120) Calendar Days**

BREAKDOWN OF COST

ITEM NO.	DESCRIPTION	ESTIMATED DIRECT COST	TOTAL MARK-UP		VAT	TOTAL INDIRECT COST	TOTAL COST
			%	VALUE			
PART I	OTHER GENERAL REQUIREMENTS						
PART II	DEPED BUILDING						
PART III	VARGAS BUILDING						
PART IV	ROTARY BUILDING						
PART V	SITE DEVELOPMENT						
TOTAL							

T O T A L C O S T ₱_____

LUMP SUM BID IN WORDS : _____

Contractor : _____

BILL OF QUANTITIES
(Building Construction/Rehabilitation Project)

PROJECT TITLE : **PROPOSED UPGRADING OF ELECTRICAL SYSTEM AND WATER SYSTEM AT STA. LUCIA SENIOR HIGH SCHOOL**

LOCATION : **BARANGAY STA. LUCIA, DISTRICT 5, QUEZON CITY**

PROJECT NO. : **24 - 00063**

DURATION : **One Hundred Twenty (120) Calendar Days**

ITEM CODE	DESCRIPTION	QUANTITY	UNIT	ESTIMATED DIRECT COST	MARK-UP IN %		TOTAL MARK-UP		VAT	TOTAL INDIRECT COST	TOTAL COST	UNIT COST
					OCM	PROFIT	%	VALUE				
PART I	**OTHER GENERAL REQUIREMENTS**											
B.5	Project Billboard / Sign Board	1	ea									
B.7(1)	Occupational Safety and Health	4	mo									
B.9	Mobilization	1	lot									
B.9	Demobilization	1	lot									
B.20	Temporary Enclosure	24	l.m									
B.24	Scaffolding (Rental)	155	m^2									
	TOTAL OF PART I											
PART II	**DEPED BUILDING**											
PART A	**CIVIL, SANITARY/PLUMBING AND MECHANICAL WORKS**											
PART II-A	**REMOVAL WORKS**											
800(1)	Clearing and Grubbing	30	m^2									
801(1)	Removal of Actual Structures / Obstruction	4	m^2									
800(1)	Removal of Tiles	293	m^2									
800(1)	Removal of Plumbing Fixtures	13	ea									
801(1)	Removal of Ceiling Board Including Framing	60	m^2									
801(1)	Removal of Doors	27	m^2									
801(1)	Chipping Works	1	m^3									
	TOTAL OF PART II-A											
PART II-B	**PLAIN AND REINFORCED CONCRETE WORKS**											
900(3)c	Structural Concrete (Site Mix, 3000psi, 28 days)	1	m^3									
902(1)a	Reinforcing Steel (Deformed), Grade 40	14	kg									
903(2)	Formworks and Falseworks	3	m^2									
	TOTAL OF PART II-B											

ITEM CODE	DESCRIPTION	QUANTITY	UNIT	ESTIMATED DIRECT COST	MARK-UP IN %		TOTAL MARK-UP		VAT	TOTAL INDIRECT COST	TOTAL COST	UNIT COST
					OCM	PROFIT	%	VALUE				
PART II-C	**FINISHING AND OTHER CIVIL WORKS**											
II-C.1 Moisture Protection												
1016(1)b	Waterproofing, Liquid	122	m²									
II-C.2 Masonry Works												
1021(3)a	Floor Topping, Plain	162	m²									
II-C.3 Carpentry and Joinery Works												
1003(1)e1	Ceiling, Metal Frame, MR Gypsum Board	63	m²									
1003(13)	Urinal Partition	4	ea									
II-C.4 Floor Finishes												
1018(1)	Glazed Tiles	282	m^2									
1018(2)	Unglazed Tiles	67	m^2									
II-C.5 Installation of Door												
1010(2)a	Doors (Flush)	29	m^2									
II-C.6 Painting, Varnishing and Other Related Works												
1032(1)a	Painting Works, Masonry / Concrete	72	m^2									
1032(1)b	Painting Works, Wood	63	m^2									
	TOTAL OF PART II-C											
PART II-D	**SANITARY/PLUMBING WORKS**											
II-D.1 Sewer Line Works												
1001 (1) a5	50mm Ø PVC Pipe and Fittings with Hanger/Support	182	l.m.									
1001 (1) a7	100mm Ø PVC Pipe and Fittings with Hanger/Support	168	l.m.									
II-D.2 Water Line Works												
1002 (2) a3	20mm Ø PPR Pipe and Fittings with Hanger/Support	15	l.m.									
1002 (2) b3	25mm Ø PPR Pipe and Fittings with Hanger/Support	33	l.m.									
1002 (2) c3	32mm Ø PPR Pipe and Fittings with Hanger/Support	22	l.m.									
1002 (2) d3	40mm Ø PPR Pipe and Fittings with Hanger	29	l.m.									
1002 (2) e3	50mm Ø PPR Pipe and Fittings with Hanger/Support	143	l.m.									
II-D.3 Plumbing / Sanitary Fixtures												
1002 (5) b	Water Closet, Elongated, Flush Valve Type, with Complete Accessories, Pipes and Fittings	12	set									
1002 (9) b	Urinal,Flush Valve Lever Type, with Complete Accessories, Pipes and Fittings	4	set									
1002 (14) a	Lavatory Wall Hung with Faucet and Complete Accessories, Pipes and Fittings	1	set									
1002 (16) a3	Floor Drain, 100mmØ, Stainless with Complete Accessories and Fittings	12	set									
1002 (16) a4	Lavatory Drain, 100mmØ, Stainless with Complete Accessories and Fittings	14	set									
1002 (21)	Lavatory Faucet	14	set									
1002 (22)	Hose Bibb	1	set									
II-D.4 Valves and Fittings												
1201(12) d1	40mm Ø Gate Valve	8	pc									
1201(12) d2	40mm Ø Union Patente	4	pc									
1201(12) e1	50mm Ø Gate Valve	4	pc									
1201(12) e2	50mm Ø Union Patente	4	pc									
1201(12) e3	50mm Ø Check Valve	4	pc									
1201(12) e4	50mm Ø Float Valve	2	pc									
	TOTAL OF PART II-D											

ITEM CODE	DESCRIPTION	QUANTITY	UNIT	ESTIMATED DIRECT COST	MARK-UP IN %		TOTAL MARK-UP		VAT	TOTAL INDIRECT COST	TOTAL COST	UNIT COST
					OCM	PROFIT	%	VALUE				
PART II-E	**MECHANICAL WORKS**											
1201(2)	Transfer Pump with Control	2	set									
1201(9) a	Water Tank (Stainless)	1	set									
	TOTAL OF PART II-E											
	TOTAL OF PART A											
PART III	**VARGAS BUILDING**											
PART B	**CIVIL, SANITARY/PLUMBING AND MECHANICAL WORKS**											
PART III-A	**REMOVAL WORKS**											
800(1)	Clearing and Grubbing	65	m²									
801(1)	Removal of Actual Structures / Obstruction	3	m²									
800(1)	Removal of Tiles	502	m²									
800(1)	Removal of Plumbing Fixtures	22	ea									
801(1)	Removal of Doors	36	m²									
801(1)	Chipping Works	1	m^3									
	TOTAL OF PART III-A											
PART III-B	**PLAIN AND REINFORCED CONCRETE WORKS**											
900(3)c	Structural Concrete (Site Mix, 3000psi, 28 days)	1	m^3									
902(1)a	Reinforcing Steel (Deformed), Grade 40	14	kg									
903(2)	Formworks and Falseworks	3	m²									
	TOTAL OF PART III-B											
PART III-C	**FINISHING AND OTHER CIVIL WORKS**											
III-C.1 Moisture Protection												
1016(1)b	Waterproofing, Liquid	115	m²									
III-C.2 Masonry Works												
1021(3)a	Floor Topping, Plain	115	m²									
III-C.3 Carpentry and Joinery Works												
1003(13)	Urinal Partition	6	ea									
III-C.4 Floor Finishes												
1018(1)	Glazed Tiles	391	m^2									
1018(2)	Unglazed Tiles	153	m^2									
III-C.5 Installation of Door												
1010(2)a	Flush Door	37	m^2									
III-C.6 Painting, Varnishing and Other Related Works												
1032(1)a	Painting Works, Masonry / Concrete	69	m^2									
	TOTAL OF PART III-C											

ITEM CODE	DESCRIPTION	QUANTITY	UNIT	ESTIMATED DIRECT COST	MARK-UP IN %		TOTAL MARK-UP		VAT	TOTAL INDIRECT COST	TOTAL COST	UNIT COST
					OCM	PROFIT	%	VALUE				
PART III-D	**SANITARY/PLUMBING WORKS**											
III-D.1 Sewer Line Works												
1001 (1) a5	50mm Ø PVC Pipe and Fittings with Hanger/Support	246	l.m.									
1001 (1) a7	100mm Ø PVC Pipe and Fittings with Hanger/Support	223	l.m.									
III-D.2 Water Line Works												
1002 (2) a3	20mm Ø PPR Pipe and Fittings with Hanger/Support	35	l.m.									
1002 (2) b3	25mm Ø PPR Pipe and Fittings with Hanger/Support	75	l.m.									
1002 (2) c3	32mm Ø PPR Pipe and Fittings with Hanger/Support	116	l.m.									
1002 (2) d3	40mm Ø PPR Pipe and Fittings with Hanger	172	l.m.									
1002 (2) e3	50mm Ø PPR Pipe and Fittings with Hanger/Support	12	l.m.									
III-D.3 Sanitary / Plumbing Fixtures												
1002 (5) b	Water Closet, Elongated, Flush Valve Type, with Complete Accessories, Pipes and Fittings	20	set									
1002 (9) b	Urinal,Flush Valve Lever Type, with Complete Accessories, Pipes and Fittings	13	set									
1002 (13)	Slop Sink with Faucet and Complete Accessories, Pipes and Fittings	2	set									
1002 (14) a	Lavatory Wall Hung with Faucet and Complete Accessories, Pipes and Fittings	2	set									
1002 (16) a3	Floor Drain, 100mmØ, Stainless with Complete Accessories and Fittings	27	set									
1002 (16) a4	Lavatory Drain, 100mmØ, Stainless with Complete Accessories and Fittings	24	set									
1002 (21)	Lavatory Faucet	26	set									
1002 (22)	Hose Bibb	1	set									
III-D.4 Valves and Fittings												
1201(12) d1	40mm Ø Gate Valve	11	pc									
1201(12) d2	40mm Ø Union Patente	4	pc									
1201(12) e1	50mm Ø Gate Valve	3	pc									
1201(12) e2	50mm Ø Union Patente	3	pc									
1201(12) e3	50mm Ø Check Valve	3	pc									
	TOTAL OF PART III-D											
PART III-F	**MECHANICAL WORKS**											
1201(6) a2	Booster Pump with Control	2	set									
1201(10) a2	Pressure Tank (Stainless)	1	set									
	TOTAL OF PART III-F											
	TOTAL OF PART B											
PART IV	**ROTARY BUILDING**											
PART C	**CIVIL, SANITARY/PLUMBING AND MECHANICAL WORKS**											
PART IV-A	**REMOVAL WORKS**											
801(1)	Removal of Doors	2	m^2									
800(1)	Removal of Plumbing Fixtures	4	ea									
800(1)	Removal of Tiles	26	m^2									
801(1)	Chipping Works	1	m^3									
	TOTAL OF PART IV-A											

ITEM CODE	DESCRIPTION	QUANTITY	UNIT	ESTIMATED DIRECT COST	MARK-UP IN %		TOTAL MARK-UP		VAT	TOTAL INDIRECT COST	TOTAL COST	UNIT COST
					OCM	PROFIT	%	VALUE				
PART IV-B	**FINISHING AND OTHER CIVIL WORKS**											
IV-B.1 Moisture Protection												
1016(1)b	Waterproofing, Liquid	12	m^2									
IV-B.2 Masonry Works												
1021(3)a	Floor Topping, Plain	5	m^2									
IV-B.3 Floor Finishes												
1018(1)	Glazed Tiles	22	m^2									
1018(2)	Unglazed Tiles	5	m^2									
IV-B.4 Installation of Door												
1010(2)a	Flush Door	2	m^2									
IV-B.5 Painting, Varnishing and Other Related Works												
1018(1)	Painting Works, Masonry / Concrete	9	m^2									
	TOTAL OF PART IV-B											
PART IV-C	**SANITARY/PLUMBING WORKS**											
IV-C.1 Water Line Works												
1002 (2) a3	20mm Ø PPR Pipe and Fittings with Hanger/Support	8	l.m.									
1002 (2) b3	25mm Ø PPR Pipe and Fittings with Hanger/Support	8	l.m.									
1002 (2) c3	32mm Ø PPR Pipe and Fittings with Hanger/Support	15	l.m.									
1002 (2) d3	40mm Ø PPR Pipe and Fittings with Hanger	10	l.m.									
IV-C.2 Plumbing / Sanitary Works												
1002 (5) a	Water Closet, Elongated, Tank Type, with Complete Accessories, Pipes and Fittings	2	set									
1002 (14) a	Lavatory Wall Hung with Faucet and Complete Accessories, Pipes and Fittings	2	set									
1002 (22)	Hose Bibb	2	set									
IV-C.3 Valves and Fittings												
1201(12) b1	25mm Ø Gate Valve	4	pc									
1201(12) b2	25mm Ø Union Patente	2	pc									
1201(12) d1	40mm Ø Gate Valve	2	pc									
1201(12) d2	40mm Ø Union Patente	2	pc									
1201(12) d3	40mm Ø Check Valve	2	pc									
	TOTAL OF PART IV-C											
PART IV-E	**MECHANICAL WORKS**											
1201(6) a1	Booster Pump with Control	1	set									
1201(10) a1	Pressure Tank (Stainless)	1	set									
	TOTAL OF PART IV-E											
	TOTAL OF PART C											

ITEM CODE	DESCRIPTION	QUANTITY	UNIT	ESTIMATED DIRECT COST	MARK-UP IN %		TOTAL MARK-UP		VAT	TOTAL INDIRECT COST	TOTAL COST	UNIT COST
					OCM	PROFIT	%	VALUE				
PART V	**SITE DEVELOPMENT**											
PART D	**ELECTRICAL WORKS**											
V-A.1 Conduits, Boxes and Fittings												
1100 (2) a	15mmØ IMC Pipe	2	pc									
1100 (2) b	20mmØ IMC Pipe	2	pc									
1100 (2) c	25mmØ IMC Pipe	2	pc									
1100 (2) i	90mmØ IMC Pipe	2	pc									
V-A.2 Wires and Wiring Devices												
1101	5.5mm² THHN Wire and 3.5mm² TW Wire	12	l.m.									
1101	8.0mm² THHN Wire and 5.5mm² TW Wire	12	l.m.									
1101	14mm² THHN Wire and 8.0mm² TW Wire	12	l.m.									
1101	250mm² THHN Wire and 60mm² THW Wire	18	l.m.									
1101	125mm² THW Wire	480	l.m.									
V-A.3 Panelboard with Main and Branch Breakers												
1102	MCB, 400AT, 3P	1	set									
1102	ECB, 60AT, 2P	1	set									
1102	ECB, 40AT, 2P	1	set									
1102	ECB, 30AT, 2P	1	set									
V-A.4 Utility and Ancillary												
1111	Reinforced Concrete Pole (Service Entrance)	1	set									
	TOTAL OF PART D											
	GRAND TOTAL											

Section IX. Checklist of Technical and Financial Documents

Notes on the Checklist of Technical and Financial Documents

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

a. GPPB Resolution No. 09-2020 on the efficient procurement measures during a State of Calamity or other similar issuances that shall allow the use of alternate documents in lieu of the mandated requirements; or

b. any subsequent GPPB issuances adjusting the documentary requirements after the effectivity of the adoption of the PBDs.

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

Checklist of Technical and Financial Documents

I. TECHNICAL COMPONENT ENVELOPE

Class "A" Documents

Legal Documents

☐ (a) Valid PhilGEPS Registration Certificate (Platinum Membership) (all pages);
and

☐ (b) Registration certificate from Securities and Exchange Commission (SEC), Department of Trade and Industry (DTI) for sole proprietorship, or Cooperative Development Authority (CDA) for cooperatives or its equivalent document;
and

☐ (c) Mayor's or Business permit issued by the city or municipality where the principal place of business of the prospective bidder is located, or the equivalent document for Exclusive Economic Zones or Areas;
and

☐ (e) Tax clearance per E.O. No. 398, s. 2005, as finally reviewed and approved by the Bureau of Internal Revenue (BIR).

Technical Documents

☐ (f) Statement of the prospective bidder of all its ongoing government and private contracts, including contracts awarded but not yet started, if any, whether similar or not similar in nature and complexity to the contract to be bid *(please see attached prescribed forms required by the QC – BAC for Infrastructure and Consultancy)*;
and

☐ (g) Statement of the bidder's Single Largest Completed Contract (SLCC) similar to the contract to be bid, except under conditions provided under the rules with an attached Notice of Award, Notice to Proceed, Contract and Certificate of Acceptance *(please see attached prescribed form required by the QC – BAC for Infrastructure and Consultancy)*; **and**

☐ (h) Philippine Contractors Accreditation Board (PCAB) License;
or
Special PCAB License in case of Joint Ventures;
and registration for the type and cost of the contract to be bid; **and**

☐ (i) Original copy of Bid Security. If in the form of a Surety Bond, submit also a certification issued by the Insurance Commission;
or
Original copy of Notarized Bid Securing Declaration; **and**

(j) Project Requirements, which shall include the following:

☐ a. Organizational chart for the contract to be bid;

☐ b. List of contractor's key personnel (*e.g.*, Project Manager, Project Engineers, Materials Engineers, and Foremen), to be assigned to the contract to be bid, with their complete qualification and experience data *(please see attached prescribed form required by the QC – BAC for Infrastructure and Consultancy)*;

☐ c. List of contractor's major equipment units, which are owned, leased, and/or under purchase agreements, supported by proof of ownership or certification of availability of equipment from the equipment lessor/vendor for

the duration of the project, as the case may be *(please see attached prescribed form required by the QC – BAC for Infrastructure and Consultancy)*; **and**

☐ (k) Original duly signed Omnibus Sworn Statement (OSS);
and if applicable, Original Notarized Secretary's Certificate in case of a corporation, partnership, or cooperative; or Original Special Power of Attorney of all members of the joint venture giving full power and authority to its officer to sign the OSS and do acts to represent the Bidder.

Additional Technical Requirements:

- ☐ Certificate of Site Inspection or Affidavit of Site Inspection as part of Omnibus Sworn Statement
- ☐ Affidavit of Undertaking for Key Personnel and Equipment *(please see attached prescribed form required by the QC – BAC for Infrastructure and Consultancy)*
- ☐ Equipment Utilization Schedule
- ☐ Manpower Schedule
- ☐ Construction Schedule and S-Curve
- ☐ PERT-CMP
- ☐ Construction Methods

Financial Documents

☐ (l) The prospective bidder's audited financial statements, showing, among others, the prospective bidder's total and current assets and liabilities, stamped "received" by the BIR or its duly accredited and authorized institutions, for the preceding calendar year which should not be earlier than two (2) years from the date of bid submission; **and**

☐ (m) The prospective bidder's computation of Net Financial Contracting Capacity (NFCC) *(please see attached prescribed form required by the QC – BAC for Infrastructure and Consultancy)*.

Class "B" Documents

☐ (n) If applicable, duly signed joint venture agreement (JVA) in accordance with RA No. 4566 and its IRR in case the joint venture is already in existence;
or
duly notarized statements from all the potential joint venture partners stating that they will enter into and abide by the provisions of the JVA in the instance that the bid is successful.

II. FINANCIAL COMPONENT ENVELOPE

☐ (o) Original of duly signed and accomplished Financial Bid Form; **and**

Other documentary requirements under RA No. 9184

☐ (p) Original of duly signed Bid Prices in the Bill of Quantities; **and**

☐ (q) Duly accomplished Detailed Estimates Form, including a summary sheet indicating the unit prices of construction materials, labor rates, and equipment rentals used in coming up with the Bid; **and**

☐ (r) Cash Flow by Quarter.

Bid Form for the Procurement of Infrastructure Projects

[shall be submitted with the Bid]

BID FORM

Date : _____

Project Identification No. : _____

To: [name and address of Procuring Entity]

Having examined the Philippine Bidding Documents (PBDs) including the Supplemental or Bid Bulletin Numbers *[insert numbers],* the receipt of which is hereby duly acknowledged, we, the undersigned, declare that:

a. We have no reservation to the PBDs, including the Supplemental or Bid Bulletins, for the Procurement Project: *[insert name of contract];*

b. We offer to execute the Works for this Contract in accordance with the PBDs;

c. The total price of our Bid in words and figures, excluding any discounts offered below is: *[insert information]*;

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

e. The total bid price includes the cost of all taxes, such as, but not limited to: *[specify the applicable taxes, e.g. (i) value added tax (VAT), (ii) income tax, (iii) local taxes, and (iv) other fiscal levies and duties],* which are itemized herein and reflected in the detailed estimates,

f. Our Bid shall be valid within the a period stated in the PBDs, and it shall remain binding upon us at any time before the expiration of that period;

g. If our Bid is accepted, we commit to obtain a Performance Security in the amount of *[insert percentage amount]* percent of the Contract Price for the due performance of the Contract, or a Performance Securing Declaration in lieu of the the allowable forms of Performance Security, subject to the terms and conditions of issued GPPB guidelines[1] for this purpose;

h. We are not participating, as Bidders, in more than one Bid in this bidding process, other than alternative offers in accordance with the Bidding Documents;

i. We understand that this Bid, together with your written acceptance thereof included in your notification of award, shall constitute a binding contract between us, until a formal Contract is prepared and executed; and

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

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[1] currently based on GPPB Resolution No. 09-2020

k. We likewise certify/confirm that the undersigned, is the duly authorized representative of the bidder, and granted full power and authority to do, execute and perform any and all acts necessary to participate, submit the bid, and to sign and execute the ensuing contract for the [Name of Project] of the [Name of the Procuring Entity*].*

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

Name: _____

Legal Capacity: _____

Signature: _____

Duly authorized to sign the Bid for and behalf of: _____

Date: _____

Bid Securing Declaration Form

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

REPUBLIC OF THE PHILIPPINES)
CITY OF _____) S.S.

BID SECURING DECLARATION
Project Identification No.: *[Insert number]*

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

I/We, the undersigned, declare that:

1. I/We understand that, according to your conditions, bids must be supported by a Bid Security, which may be in the form of a Bid Securing Declaration.

2. I/We accept that: (a) I/we will be automatically disqualified from bidding for any procurement contract with any procuring entity for a period of two (2) years upon receipt of your Blacklisting Order; and, (b) I/we will pay the applicable fine provided under Section 6 of the Guidelines on the Use of Bid Securing Declaration, within fifteen (15) days from receipt of the written demand by the procuring entity for the commission of acts resulting to the enforcement of the bid securing declaration under Sections 23.1(b), 34.2, 40.1 and 69.1, except 69.1(f),of the IRR of RA No. 9184; without prejudice to other legal action the government may undertake.

3. I/We understand that this Bid Securing Declaration shall cease to be valid on the following circumstances:

    a. Upon expiration of the bid validity period, or any extension thereof pursuant to your request;
    b. I am/we are declared ineligible or post-disqualified upon receipt of your notice to such effect, and (i) I/we failed to timely file a request for reconsideration or (ii) I/we filed a waiver to avail of said right; and
    c. I am/we are declared the bidder with the Lowest Calculated Responsive Bid, and I/we have furnished the performance security and signed the Contract.

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

[Insert NAME OF BIDDER OR ITS AUTHORIZED REPRESENTATIVE]
[Insert signatory's legal capacity]
Affiant

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

GPPB Resolution No. 16-2020, dated 16 September 2020

Omnibus Sworn Statement (Revised)

[shall be submitted with the Bid]

REPUBLIC OF THE PHILIPPINES)
CITY/MUNICIPALITY OF _____) S.S.

AFFIDAVIT

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

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

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

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

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

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

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

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

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

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

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

[If a sole proprietorship:] The owner or sole proprietor is not related to the Head of the Procuring Entity, Procurement Agent if engaged, members of the Bids and Awards Committee (BAC), the Technical Working Group, and the BAC Secretariat, the head of the Project Management Office or the end-user unit, and the project consultants by consanguinity or affinity up to the third civil degree;

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

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

7. *[Name of Bidder]* complies with existing labor laws and standards; and

8. *[Name of Bidder]* is aware of and has undertaken the responsibilities as a Bidder in compliance with the Philippine Bidding Documents, which includes:

    a. Carefully examining all of the Bidding Documents;
    b. Acknowledging all conditions, local or otherwise, affecting the implementation of the Contract;
    c. Making an estimate of the facilities available and needed for the contract to be bid, if any; and
    d. Inquiring or securing Supplemental/Bid Bulletin(s) issued for the *[Name of the Project]*.

9. *[Name of Bidder]* did not give or pay directly or indirectly, any commission, amount, fee, or any form of consideration, pecuniary or otherwise, to any person or official, personnel or representative of the government in relation to any procurement project or activity.

10. <u>In case advance payment was made or given, failure to perform or deliver any of the obligations and undertakings in the contract shall be sufficient grounds to constitute criminal liability for Swindling (Estafa) or the commission of fraud with unfaithfulness or abuse of confidence through misappropriating or converting any payment received by a person or entity under an obligation involving the duty to deliver certain goods or services, to the prejudice of the public and the government of the Philippines pursuant to Article 315 of Act No. 3815 s. 1930, as amended, or the Revised Penal Code.</u>

11. We pledge that the project will be completed in accordance and congruency with the approved plans and programs.

IN WITNESS WHEREOF, I have hereunto set my hand this __ day of ___, 20__ at _____, Philippines.

[Insert NAME OF BIDDER OR ITS AUTHORIZED REPRESENTATIVE]
[Insert signatory's legal capacity]
Affiant

[Jurat]

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

Contract Agreement Form for the Procurement of Infrastructure Projects (Revised)

[not required to be submitted with the Bid, but it shall be submitted within ten (10) days after receiving the Notice of Award]

CONTRACT AGREEMENT

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

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

NOW THIS AGREEMENT WITNESSETH AS FOLLOWS:

1. In this Agreement, words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Contract hereinafter referred to.

2. The following documents as required by the 2016 revised Implementing Rules and Regulations of Republic Act No. 9184 shall be deemed to form and be read and construed as part of this Agreement, *viz*.:

   a. Philippine Bidding Documents (PBDs);
      i. Drawings/Plans;
      ii. Specifications;
      iii. Bill of Quantities;
      iv. General and Special Conditions of Contract;
      v. Supplemental or Bid Bulletins, if any;

   b. Winning bidder's bid, including the Eligibility requirements, Technical and Financial Proposals, and all other documents or statements submitted;

   Bid form, including all the documents/statements contained in the Bidder's bidding envelopes, as annexes, and all other documents submitted (*e.g.*, Bidder's response to request for clarifications on the bid), including corrections to the bid, if any, resulting from the Procuring Entity's bid evaluation;

   c. Performance Security;

   d. Notice of Award of Contract and the Bidder's conforme thereto; and

   e. Other contract documents that may be required by existing laws and/or the Procuring Entity concerned in the PBDs. **Winning bidder agrees that additional contract documents or information prescribed by the GPPB that are subsequently required for submission after the contract execution, such as the Notice to Proceed, Variation Orders, and Warranty Security, shall likewise form part of the Contract.**

3. In consideration for the sum of *[total contract price in words and figures]* or such other sums as may be ascertained, *[Named of the bidder]* agrees to *[state the object of the contract]* in accordance with his/her/its Bid.

4. The *[Name of the procuring entity]* agrees to pay the above-mentioned sum in accordance with the terms of the Bidding.

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

[Insert Name and Signature]	*[Insert Name and Signature]*
[Insert Signatory's Legal Capacity]	*[Insert Signatory's Legal Capacity]*
for:	*for:*
[Insert Procuring Entity]	*[Insert Name of Supplier]*

Acknowledgment

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

LIST OF ALL ON-GOING GOVERNMENT AND PRIVATE CONTRACTS

NAME OF CONTRACTOR: _____

PROJECT TITLE (Name of the Contract) & EXACT PROJECT LOCATION	DATE OF CONTRACT	CONTRACT DURATION	PROJECT OWNER & POSTAL ADDRESS	NATURE OF WORK	CONTRACTOR'S ROLE (JOINT VENTURE, SUBCONTRACTOR, PARTNERSHIP) and PERCENTAGE OF PARTICIPATION	TOTAL CONTRACT VALUE AT AWARD	DATE OF COMPLETION or ESTIMATED COMPLETION TIME	TOTAL CONTRACT VALUE AT COMPLETION if APPLICABLE	PERCENTAGE		VALUE OF OUTSTANDING WORKS (IN PHP)
									ACTUAL ACCOMPLISHMENT	PLANNED ACCOMPLISHMENT	
									TOTAL AMOUNT (Php) OF OUTSTANDING WORKS		

PHOTOCOPY ADDITIONAL FORMS, IF NECESSARY

LIST OF ALL AWARDED BUT NOT YET STARTED GOVERNMENT AND PRIVATE CONTRACTS OF THE BIDDER

NAME OF CONTRACTOR: _____

PROJECT TITLE: _____

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

PHOTOCOPY ADDITIONAL FORMS, IF NECESSARY

SINGLE LARGEST COMPLETED CONTRACT SIMILAR TO THE CONTRACT TO BE BID

NAME OF CONTRACTOR: _____

PROJECT TITLE: _____

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

PHOTOCOPY ADDITIONAL FORMS, IF NECESSARY

LIST OF MAJOR EQUIPMENT TO BE USED FOR THE PROJECT

NAME OF CONTRACTOR: _____

PROJECT TITLE: _____

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

PHOTOCOPY ADDITIONAL FORMS, IF NECESSARY

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

NAME OF CONTRACTOR: _____

PROJECT TITLE: _____

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

PHOTOCOPY ADDITIONAL FORMS, IF NECESSARY

COMPUTATION OF NET FINANCIAL CONTRACTING CAPACITY (NFCC)

NAME OF BIDDER: _____

CURRENT ASSETS*		PHP	
(LESS) CURRENT LIABILITIES*	(LESS)	PHP	
NETWORTH		PHP	
NETWORTH x 15	x 15	PHP	
(LESS) VALUE OF ALL OUTSTANDING ON-GOING CONTRACTS**	(LESS)	PHP	
(LESS) VALUE OF ALL AWARDED BUT NOT YET STARTED CONTRACTS AS OF DATE**	(LESS)	PHP	
NET FINANCIAL CONTRACTING CAPACITY		PHP	

NOTES:
* CURRENT ASSETS AND LIABILITIES BASED ON AUDITED FINANCIAL STATEMENT FOR THE PRECEDING CALENDAR YEAR SUBMITTED TO B.I.R.

** BASED ON LIST OF ON-GOING AND AWRDED BUT NOT YEY STARTED CONTRACTS SUBMITTED

REPUBLIC OF THE PHILIPPINES)
_____) S. S.

AFFIDAVIT OF UNDERTAKING

I, _____, of legal age, Filipino, ***[OFFICER OR REPRESENTATIVE]*** ____

with office address at _____ after having been duly sworn to in accordance with law, hereby voluntary depose and state:

That I am duly authorized representative of the **[Name of Bidder** to execute this undertaking as evidenced by Secretary's Certificate and Board Resolution.

That **[Name of Bidder]** bidding for the (Name of Project)

That relative to the aforementioned Project, the [Name of Bidder] hereby undertake that the equipment to be use and the key personnel to be assign shall exclusively be used and will only perform to the project until its completion.

That I am executing this affidavit to attest to the truth of the foregoing and in compliance with the submission of the technical requirements for the public bidding of the said project.

IN WITNESS HEREOF, I have hereunto signed my name below this _____day of_____, _____at _____.

AFFIANT FURTHER SAYETH NAUGHT.

_____
Affiant

SUBSCRIBED AND SWORN TO BEFORE ME this ___ day of _____, _____in _____, affiant exhibiting to me his/her _____ issued at _____on _____.

Doc. No. ;
Page No. ;
Book No. ;
Series of 2020

_____
Notary Public


Republic of the Philippines
gppb
Government Procurement Policy Board