

PHILIPPINE BIDDING DOCUMENTS

Procurement of INFRASTRUCTURE PROJECTS

Government of the Republic of the Philippines

**PROPOSED REHABILITATION OF SAN BARTOLOME
HIGH SCHOOL**

**Project number:
22-00173**

**Sixth Edition
July 2020**

Preface

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

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

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

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

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

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

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

TABLE OF CONTENTS

Glossary of Terms, Abbreviations, and Acronyms.....	5
Section I. Invitation to Bid	8
Section II. Instructions to Bidders.....	9
1. Scope of Bid	10
2. Funding Information	10
3. Bidding Requirements.....	10
4. Corrupt, Fraudulent, Collusive, Coercive, and Obstructive Practices	10
5. Eligible Bidders.....	11
6. Origin of Associated Goods	11
7. Subcontracts	11
8. Pre-Bid Conference.....	12
9. Clarification and Amendment of Bidding Documents.....	12
10. Documents Comprising the Bid: Eligibility and Technical Components	12
11. Documents Comprising the Bid: Financial Component	13
12. Alternative Bids	13
13. Bid Prices	13
14. Bid and Payment Currencies.....	13
15. Bid Security.....	14
16. Sealing and Marking of Bids.....	14
17. Deadline for Submission of Bids	14
18. Opening and Preliminary Examination of Bids	14
19. Detailed Evaluation and Comparison of Bids	14
20. Post Qualification.....	15
21. Signing of the Contract	15
Section III. Bid Data Sheet.....	16
Section IV. General Conditions of Contract	19
1. Scope of Contract.....	20
2. Sectional Completion of Works	20
3. Possession of Site.....	20
4. The Contractor's Obligations	20
5. Performance Security	20
6. Site Investigation Reports	21

7.	Warranty.....	21
8.	Liability of the Contractor.....	21
9.	Termination for Other Causes	21
10.	Dayworks	21
11.	Program of Work.....	22
12.	Instructions, Inspections and Audits	22
13.	Advance Payment.....	22
14.	Progress Payments	22
15.	Operating and Maintenance Manuals.....	22
Section V. Special Conditions of Contract.....		24
Section VI. Specifications		26
Section VII. Drawings.....		28
Section VIII. Bill of Quantities		29
Section IX. Checklist of Technical and Financial Documents.....		31

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.



REPUBLIC OF THE PHILIPPINES
QUEZON CITY GOVERNMENT
BIDS AND AWARDS COMMITTEE FOR INFRASTRUCTURE &
CONSULTANCY



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

November 25, 2022

Invitation to Bid

No.	Project No.	Project Name	Location	Amount	Duration Cal. Days	Office	Source Fund
<u>Buildings – Small B</u>							
1	22-00160	Proposed Upgrading of Electrical System at Villa Verde Elementary School	Sta. Monica	1,283,171.56	30	Engineering Department	SDO - Local School Board
2	22-00161	Proposed Renovation of Four Storey SB Science Building at Carlos Albert High School	Santol	2,352,427.79	60	Engineering Department	SDO - Local School Board
3	22-00162	Proposed Construction of Additional Handwashing Facility and Rehabilitation of Comfort Rooms at Sinagtala Elementary School	San Antonio	2,523,866.59	60	Engineering Department	SDO - Local School Board
4	22-00163	Proposed Rehabilitation of Comfort Rooms at Camarilla Elementary School	San Roque	3,030,957.00	90	Engineering Department	SDO - Local School Board
5	22-00164	Proposed Rehabilitation of Comfort rooms at Balumbato Elementary School	Balumbato	4,272,283.81	90	Engineering Department	SDO - Local School Board
6	22-00165	Proposed Rehabilitation of Covered Court at Hobart Village HOA, Inc.	Kaligayahan	6,124,499.75	120	Engineering Department	OCM - 20% CDF
7	22-00166	Proposed Rehabilitation of Electrical System at Bagbag Elementary School	Bagbag	7,032,679.79	120	Engineering Department	SDO - Local School Board
8	22-00167	Proposed Rehabilitation of Barangay Health Center and Vargas Multi-Purpose Hall	San Agustin	7,817,907.96	90	Engineering Department	OCM - 20% CDF
9	22-00168	Proposed Rehabilitation of HB Building at San Diego Elementary School	Batasan Hills	20,251,081.84	180	Engineering Department	SDO - Local School Board
10	22-00169	Proposed Rehabilitation of Bautista Building, Drainage System and Construction of Comfort Room at North Fairview High School	North Fairview	20,847,208.56	180	Engineering Department	SDO - Local School Board

11	22-00170	Proposed Construction of Perimeter Fence and Upgrading of Electrical System at San Bartolome Elementary School	San Bartolome	21,320,673.64	180	Engineering Department	SDO - Local School Board
12	22-00171	Proposed Construction of Electrical Room and Upgrading of Electrical System at Don Alejandro Roces Sr. Science Technology High School	Obrero	24,253,074.13	180	Engineering Department	SDO - Local School Board
13	22-00099B	Proposed Construction of Handwashing Facility and Rehabilitation of Comfort Room at Manuel Roxas Senior High School	Paligsahan	1,703,245.31	60	Engineering Department	Special Education Fund
14	22-00102B	Proposed Rehabilitation of Fire Station	Project 6	1,963,027.52	60	Engineering Department	Engineering Department

Buildings – Medium A

15	22-00172	Proposed Rehabilitation of Mathay and Quezon Building of Novaliches High School	San Agustin	44,286,369.31	180	Engineering Department	SDO - Local School Board
16	22-00173	Proposed Rehabilitation of San Bartolome High School	San Bartolome	50,033,897.53	180	Engineering Department	SDO - Local School Board

Roads – Small B

17	22-00174	Proposed Rehabilitation of Drainage System at Ismael Mathay Senior High School	Sangandaan	1,455,721.93	90	Engineering Department	SDO - Local School Board
18	22-00175	Proposed Construction of Drainage System at Maligaya High School	Pasong Putik	7,926,563.46	60	Engineering Department	SDO - Local School Board
19	22-00176	Proposed Rehabilitation of Road and Drainage at Sto. Niño Street and Sto. Niño Alleys	San Antonio	29,371,118.45	210	Engineering Department	OCM - 20% CDF

Roads – Medium A

20	22-00177	Proposed Rehabilitation of Road and Drainage at Fortune and Paxton Streets	Fairview	40,768,478.70	270	Engineering Department	OCM - 20% CDF
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1. The **QUEZON CITY LOCAL GOVERNMENT**, through *funding source of various years* intends to apply the sum stated above being the Approved Budget for the Contract (ABC) to payments under the contract *for the above stated Projects*. Bids received in excess of the ABC shall be automatically rejected at bid opening.

2. The **QUEZON CITY LOCAL GOVERNMENT** now invites bids for the above Procurement Project. Completion of the Works is required *as stated above*. Bidders should have completed a contract similar to the Project. The description of an eligible bidder is contained in the Bidding Documents, particularly, in Section II (Instructions to Bidders).
3. Bidding will be conducted through open competitive bidding procedures using non-discretionary “*pass/fail*” criterion as specified in the 2016 revised Implementing Rules and Regulations (IRR) of Republic Act (RA) No. 9184.
4. Interested bidders may obtain further information from **QUEZON CITY LOCAL GOVERNMENT – BAC Secretariat** and inspect the Bidding Documents at the address given below *weekdays from 8:00 am. – 5:00 p.m.*
5. A complete set of Bidding Documents may be acquired by interested bidders on **28 November 2022 (Monday)** from given address and website/s below *and upon payment of a non-refundable fee for the Bidding Documents, pursuant to the latest Guidelines issued by the GPPB*. The Procuring Entity shall allow the bidder to present its proof of payment for the fees *presented in person*.

STANDARD RATES:

Approved Budget for the Contract	Maximum Cost of Bidding Documents (in Philippine Peso)
More than 1 Million up to 5 Million	5,000.00
More than 5 Million up to 10 Million	10,000.00
More than 10 Million up to 50 Million	25,000.00
More than 50 Million up to 500 Million	50,000.00
More than 500 Million	75,000.00

The following are the requirements for purchase of Bidding Documents;

1. PhilGEPS Registration Certificate (Platinum – 3 Pages)
2. Document Request List (DRL)
3. Authorization to purchase bidding documents
 - 3.1 Secretary’s Certificate (for corporation)
 - 3.2 Special Power of Attorney (for sole proprietorship)
4. Notarized Joint Venture Agreement (if applicable)
5. Letter of Intent

It must be duly received by the BAC Secretariat at 2nd Floor, Procurement Department, Finance Building, Quezon City Hall Compound.

6. The **QC- BAC- INFRASTRUCTURE & CONSULTANCY** will hold a Pre-Bid Conference¹ on **December 6, 2022 at 9:00 AM** at 2nd Floor, Procurement Department-Bidding Room, Finance Building, Quezon City Hall Compound or we encourage the prospective bidders to join through our **Virtual Conference (ZOOM APP)** which shall be open to prospective bidders.

Virtual Conference (ZOOM APP)

Meeting ID: 854 9489 0133

Password: 273320

7. Bids must be duly received by the BAC Secretariat through manual submission at the office address as indicated below, on or before **December 19, 2022 – 9:00 AM**. Late bids shall not be accepted.

¹ May be deleted in case the ABC is less than One Million Pesos (PhP1,000,000) where the Procuring Entity may not hold a pre-bid conference.

8. All bids must be accompanied by a bid security in any of the acceptable forms and in the amount stated in **ITB** Clause 16.
9. Bid opening shall be on **December 19, 2022 - 10:00 AM** at **2nd Floor, Procurement Department-Bidding Room, Finance Building, Quezon City Hall Compound** and/or via Zoom. Bids will be opened in the presence of the bidders' representatives who choose to attend the activity.

Virtual Conference (ZOOM APP)

Meeting ID: 810 3646 5257

Password: 201522

10. The **Quezon City Local Government** reserves the right to reject any and all bids, declare a failure of bidding, or not award the contract at any time prior to contract award in accordance with Sections 35.6 and 41 of the 2016 revised Implementing Rules and Regulations (IRR) of RA No. 9184, without thereby incurring any liability to the affected bidder or bidders.
11. For further information, please refer to:

ATTY. DOMINIC B. GARCIA

OIC, Procurement Department

2nd Floor, Procurement Department,

Finance Building, Quezon City Hall Compound

Elliptical Road, Barangay Central Diliman, Quezon City.

Tel. No. (02)8988-4242 loc. 8506/8710

Email Add: bacinfra.procurement@quezoncity.gov.ph

Website: www.quezoncity.gov.ph

12. You may visit the following websites:

For downloading of Bidding Documents: <https://quezoncity.gov.ph/public-notices/procurement/>

By:

ATTY. MARK DALE DIAMOND P. PERRAL

Chairman, BAC-Infra and Consultancy

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 REHABILITATION OF SAN BARTOLOME HIGH SCHOOL**, with Project Identification Number **22-00173**.

[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 **2022** in the amount of **Fifty Million Thirty-Three Thousand Eight Hundred Ninety-Seven Pesos and 53/100 Cts. (P 50,033,897.53)**.

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 “P” 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 **December 6, 2022, 9:00 A.M. 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	<i>No additional contractor license or permit is required</i> <i>In addition, eligible bidders shall qualify or comply with the following:</i> 1. Bidders with valid Philippine Contractors Accreditation Board (PCAB) Type Building – Medium A																																								
10.4	<table><tr><td colspan="4">The minimum work experience requirements for key personnel are the following:</td></tr><tr><td>Qty.</td><td>Key Personnel</td><td>General Experience</td><td>Relevant Experience</td></tr><tr><td>1</td><td>Project-in-Charge</td><td>3 years</td><td>3 years</td></tr><tr><td>1</td><td>General Foreman</td><td>3 years</td><td>3 years</td></tr><tr><td>1</td><td>Trade Engineer/Leadman for civil works</td><td>3 years</td><td>3 years</td></tr><tr><td>1</td><td>Trade Engineer/Leadman for electrical works</td><td>3 years</td><td>3 years</td></tr><tr><td>1</td><td>Trade Engineer/Leadman for mechanical works</td><td>3 years</td><td>3 years</td></tr><tr><td>1</td><td>Safety Officer</td><td>3 years</td><td>3 years</td></tr><tr><td>1</td><td>DPWH duly accredited Materials Engineer</td><td>3 years</td><td>3 years</td></tr><tr><td colspan="4"><i>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.</i></td></tr></table>	The minimum work experience requirements for key personnel are the following:				Qty.	Key Personnel	General Experience	Relevant Experience	1	Project-in-Charge	3 years	3 years	1	General Foreman	3 years	3 years	1	Trade Engineer/Leadman for civil works	3 years	3 years	1	Trade Engineer/Leadman for electrical works	3 years	3 years	1	Trade Engineer/Leadman for mechanical works	3 years	3 years	1	Safety Officer	3 years	3 years	1	DPWH duly accredited Materials Engineer	3 years	3 years	<i>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.</i>			
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12	<i>[Insert Value Engineering clause if allowed.]</i>
15.1	<p>The bid security shall be in the form of a Bid Securing Declaration with project number, or any of the following forms and amounts:</p> <ul style="list-style-type: none"> a) The amount of not less than Php 1,000,677.95 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 2,501,694.88 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	<p>Additional Contract Documents relevant to the Project as required:</p> <ol style="list-style-type: none"> 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 180 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: <i>[list here the required site investigation reports.]</i>
7.2	<p><i>[Select one, delete the other.]</i></p> <p><i>[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:]</i> Fifteen (15) years.</p> <p><i>[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:]</i> Five (5) years.</p> <p><i>[In case of other structures, such as bailey and wooden bridges, shallow wells, spring developments, and other similar structures:]</i> Two (2) years.</p>
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	<p>The date by which operating and maintenance manuals are required is <i>thirty (30) days</i></p> <p>The date by which "as built" drawings are required as part of final payment</p>
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.



Republic of the Philippines

Quezon City

CITY ENGINEERING DEPARTMENT

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TECHNICAL SPECIFICATIONS

QUEZON CITY INFRASTRUCTURE PROJECT

PROJECT TITLE: PROPOSED REHABILITATION OF SAN BARTOLOME HIGH SCHOOL ✓

LOCATION: BARANGAY SAN BARTOLOME, DISTRICT 5, QUEZON CITY ✓

GR. GENERAL REQUIREMENTS

- a. Comply with the current and existing laws, ordinances and applicable codes, rules and regulations and standards. Any works perform 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)
 - i. 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
 - ii. Demobilization shall include all activities and costs for transportation of personnel, equipment, and supplies no 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.

j. 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

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

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

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

iv. Temporary enclosure shall be provided within the construction site with adequate guard lights, railings and proper signages

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

vi. 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.

i. A fully trained Medical Aide shall be employed permanently on the site who shall be engaged solely from medical duties.

ii. The medical room shall be provided in waterproof, 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.

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

iv. Additional safety precautions shall be provided in the observance of pandemic Protocols set forth by the government shall be strictly followed

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 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.

SW. 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 to work

B. Removal / 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

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

CWS. CIVIL / STRUCTURAL WORKS

CWSC. CONCRETE WORK

a. 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.

b. 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.

c. Materials

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

ii. 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.

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

iv. 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.

d. Proportioning and Mixing

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

Cement : Sand : Gravel

* Class 'A' - 1 : 2 : 3

* Class 'B' - 1 : 2 : 4

* Class 'C' - 1 : 2 : ½

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

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

e. Forms

i. General – Forms shall be used whenever 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 of mortar from the concrete. Forms shall be ½" waterproof plywood and form lumber.

ii. Cleaning of Forms – before placing the concrete, the contact surfaces of the forms shall be cleaned of encrustations of mortar, the grout or other foreign material.

iii. 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.

f. Placing Reinforcement:

steel reinforcement shall be provided as indicated, together with all necessary wire ties, chairs, spacer supported 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.

g. Conveying and Placing Concrete.

i. 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.

ii. 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 imbedded 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.

iii. 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.

iv. 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 courses that have commenced initial set, and reinforcement imbedded in concrete beginning to set or already set shall not be disturbed by vibrators. Consolidation around major imbedded parts shall be by hand spading and tamping and vibrators shall not be used.

v. 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.

h. Curing

i. 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.

ii. 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.

i. Finishing

- i. 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 a finished appearance except for minor defects which can be easily repaired with patching with cement mortar, or can be ground to a smooth surface to remove all joint marks of the form works.
- ii. 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.

CWSMA. 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 band:

- 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.

CWSPRW. ROOFING WORKS

1. Corrugated galvanized iron (G I) sheets, including plain aluminum sheets for roofing accessories shall be cold-rolled meeting ASTM A-153 and with spelter coating of zinc of not less than 0.381 kg/sq.m. (1.25 ounce/sq ft) conforming to ASTM A-525 or pms 67: 1965. Unless otherwise specified or shown on Plans, roofing sheets shall be gauge 26 (0.48mm thick) and provided in long span sizes to minimize end laps. Sheets shall weigh not less than 3.74 kg/sq.m. and shall be marked or stamped showing the gauge, size amount of zinc coating, brand and name of manufacturer. Test specimens shall stand being bent through 180 degrees flat on itself without fracture of the base metal and without flaking of the zinc coating

2. Ridge/hip rolls, valleys, flashing and counter flashings, gutters and downspouts, whenever required, shall be fabricated from plain G.I. sheets. Ridge/hip rolls, flashings and counter flashings shall be gauge 26. Valleys, gutters and downspouts shall be gauge 24 unless otherwise specified on Plans. Wire basket strainers shall be galvanized, gauge 24.

Roof ventilators, whenever required shall be fabricated from gauge 26 plain G.I. sheets and constructed to the dimensions and details shown on Plans.

3. The roofing shall be secured to the purlins with min. 2 1/4" max. 3" long Tek screws. Provide all-purpose sealant under the fasteners. Ridge rolls, hip rolls and valleys to be used shall be those compatible with the Ga. 24 pre-painted G.I. rib-type roofing sheets. They shall lap the roofing sheets at least 250mm. The ridge rolls, hip rolls and valleys shall be riveted to the roofing sheets.

4. Polycarbonate roofing and sunbreakers shall be covered with 6mm thick rib-type polycarbonate sheets as shown on the plans. The roofing shall be secured to the purlins with min. 2 1/4" max. 3" long Tek screws. Provide all-purpose sealant under the fasteners. Ridge rolls, hip rolls and valleys to be used shall be those compatible with the 6mm thick solid polycarbonate sheets. They shall lap the roofing sheets at least 250mm. The ridge rolls, hip rolls and valleys shall be riveted to the roofing sheets.

5. All roofing sheets adjacent to concrete hollow block and other masonry walls such as properly line firewalls, shall be provided with Gauge 26 pre-painted plain G.I. Flashing to extend to the top and over to the other side of the wall. All fasteners shall be placed at the top of the corrugations of the roofing sheets to prevent water from standing around the fasteners.

6. Provide 6mm thick thermal insulation with single-side aluminum foil prior to fastening of roofing sheets to serve as thermal protection.

CWSME. METAL WORKS

1. Materials

a. Steel and Iron. If not specified otherwise, use standard mill-finished structural steel shapes or bar iron in compliance with AISC Specifications for Design, Fabrication and Erection of Structural Steel for buildings.

b. Bolts, Nuts, Studs and Rivets. ASTM A 307 and A 325.

c. Screws. Fed. Spec. FF-S-85, Fed. Spec. FF-S-92, and Fed. Spec. FF-S-111.

d. Metal Purlins. High grade galvanized steel with minimum tensile strength of 275 MPa, 1.4mm in thickness or approved equal.

2 Fabrication:

By mechanics skilled in the trade and in accordance with the manufacturer's directions. Metalwork shall be fabricated to allow for expansion and contraction of materials. Provide welding and bracing of adequate strength and durability, with tight, flush joints, dressed smooth and clean. Complete with bolts and nuts.

3. Metal Surfaces.

Surfaces shall be clean and free from all scale, flake, rust and rust pitting; well-formed and finished to shape and size, with sharp lines, angle and smooth surface. Shearing and punching shall leave clean true lines and surfaces. Weld or rivet permanent connections. Weld and flush rivets shall be used and finished flush smooth on surfaces that will be exposed after installation. Do not use screws or bolts where they can be avoided, when used, heads shall be countersunk, screwed up tight and threads nicked to prevent loosening.

4 Construction:

Thickness of metals and details of assembly and supports shall give ample strength and stiffness for the minimum loads specified or indicated. Joints exposed to weather shall be formed to exclude water.

5 Welding:

Use welding electrode E/UXr and perform welding, welding inspection and corrective welding in accordance with AWS D1.1. Weld in a manner to prevent permanent distortion of the connected parts. Weld continuously along the entire area of contact (except where tack welding is permitted. Do not tack weld exposed to connections). Grind smooth visible weld in finished installation.

CWSMPW. WATERPROOFING

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 3mil Polyethylene sheet prior to pouring of concrete for foundation members, slabs-on-fill and slabs-on-grade.

AW. ARCHITECTURAL WORKS

AW04. 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.

The 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 Vinyl Floor Tiles. Vinyl tiles shall be of first grade quality. Fully homogeneous, flexible, resilient, and resistant to alkali moisture, grease and oil. The color and design pattern of the vinyl tile shall be uniformly distributed throughout the thickness of the tile. Vinyl tiles shall be 2mm thick.

Installation of the tile shall not commence until the work of other trades, including painting has been completed. The Contractor shall carefully examine all surfaces over which the tiles are to be set. Floor surfaces that are to receive vinyl tile shall be clean thoroughly, dry, smooth, firm and sound and free from oil, paint, wax, dirt and any other damaging material.

3 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.

4 Pebble Washout Finish. Pebble shall be well graded stones sized ranging from #4 to #10 rounded stone.

All pebble washout finish shall be done by men experienced and qualified to do this particular type of trade. The Contractor shall submit at least two samples for each type of pebble washout finish to the Engineer/Architect for approval showing its color, texture and design patterns.

Pebble washout finish mix shall consist of one part Portland cement and two parts pebble measured by volume or a proportion equivalent to 1:2. Mixtures shall be in approved containers to ensure that the specified materials are controlled and accurately measured. Mixtures measured by shovel or shovel counts will not be permitted. Unless specified otherwise pebble washout mix shall be in the proportion by volume in approved mixing machines or mortar boxes. The aggregates introduced and mixed in such a manner that the materials will be uniformly distributed throughout the mass. A sufficient amount of water shall be added gradually and the mass further mixed until a mortar plasticity necessary for the purpose intended is obtained. Mortar boxes, pans etc. where mixtures are mixed shall be kept clean and free from debris or dried mortar.

5 Granite Tiles

6.Vinyl Roll

7.Anti-Microbial Tiles

8.Hardwood Tiles

AW03. 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 smooth consistency and elasticity.

3.Double-Wall Fiber Cement Board Drywall on Metal Studs. Wall panel shall be two (2) 6 mm thick fiber cement boards, properly cut and prepared for installation and shall conform to the requirements of the Plans.

Metal Studs. Wall framing shall consist of 0.6 mm thick aluminum metal studs and aluminum metal tracks.

Fasteners and Connection detail. All construction and connections shall be secured with rivets, screws and drive pins, and shall conform to local and standard codes. Connections shall also be secured with gypsum putty and gypsum tape.

4.Toilet Partition

AW02. CEILING FINISHES

1 Fiber Cement Board on Metal Frame. The ceiling materials to be used shall conform to the samples approved by the City Engineer. All ceiling works shall be done by men experienced and qualified to do this particular specialty trade. The installation of ceiling materials shall be in accordance with the detailed section and with the manufacturer's manual instructions. Ceiling materials shall be cut as required to fit the perpendicular condition and should be properly secured by anchorage and other accessories to complete the installation. No mechanical work shall be exposed on the finish work. All joints around electrical outlets, pipes and other works extending through materials shall be sealed with caulking.

2.Moisture-Resistant Gypsum Board on Metal Frame. The ceiling materials to be used shall conform to the samples approved by the City Engineer. All ceiling works shall be done by men experienced and qualified to do this particular specialty trade. The installation of ceiling materials shall be in accordance with the detailed section and with the manufacturer's manual instructions. Ceiling materials shall be cut as required to fit the perpendicular condition and should be properly secured by anchorage and other accessories to complete the installation. No mechanical work shall be exposed on the finish work. All joints around electrical outlets, pipes and other works extending through materials shall be sealed with caulking.

3.Gypsum Board on Metal Frame. The ceiling materials to be used shall conform to the samples approved by the City Engineer. All ceiling works shall be done by men experienced and qualified to do this particular specialty trade. The installation of ceiling materials shall be in accordance with the detailed section and with the manufacturer's manual instructions. Ceiling materials shall be cut as required to fit the perpendicular condition and should be properly secured by anchorage and other accessories to complete the installation. No mechanical work shall be exposed on the finish work. All joints around electrical outlets, pipes and other works extending through materials shall be sealed with caulking.

4.Acoustic Board Ceiling on T-Runner Frame. The ceiling materials to be used shall conform to the samples approved by the City Engineer. All ceiling works shall be done by men experienced and qualified to do this particular specialty trade. The installation of ceiling materials shall be in accordance with the detailed section and with the manufacturer's manual instructions. Ceiling materials shall be cut as required to fit the perpendicular condition and should be properly secured by anchorage and other accessories to complete the installation. No mechanical work shall be exposed on the finish work. All joints around electrical outlets, pipes and other works extending through materials shall be sealed with caulking.

5. Slab Soffit

AWCM 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.

AWP. 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 clean. 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 or 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 flush with surrounding surfaces
- b. Matted or damaged shop coats on metal shall be spot primed with appropriate metal primer
- c. Painting 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

6 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 flowed 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.

AWD/W FABRICATED DOORS & WINDOWS

All doors and windows must be in approved quality as specified in the plan and program of works

S/PW. 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:

B.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

B.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.

B.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.

B.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 equipment 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 30% 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 B31.8 for building services piping.

EW. 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 of 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 solloes

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 beasketed.

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

C. 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).

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

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

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

G. 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.

H 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 Bamer: Same gauge 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.

UTI. UTILITY AND ANCILLARY WORKS

A. WATER-PUMPING SYSTEM

- f. This item shall consist of furnishing and installation of water pumping system, inclusive of all piping and pipe fitting connections, valves, controls, electrical wirings, tanks and all accessories ready for service in accordance with the approved Plans and Specifications.

2 Exposed piping shall be provided with concrete saddle or steel clamps or hangers to secure them firmly to the structures.

Pipe threads shall be lubricated by white lead, red lead, Teflon or other approved lubrication before tightening

Piping supports shall be placed at 3m intervals or less

B. 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)

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

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

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

F. 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.

Prepared by:

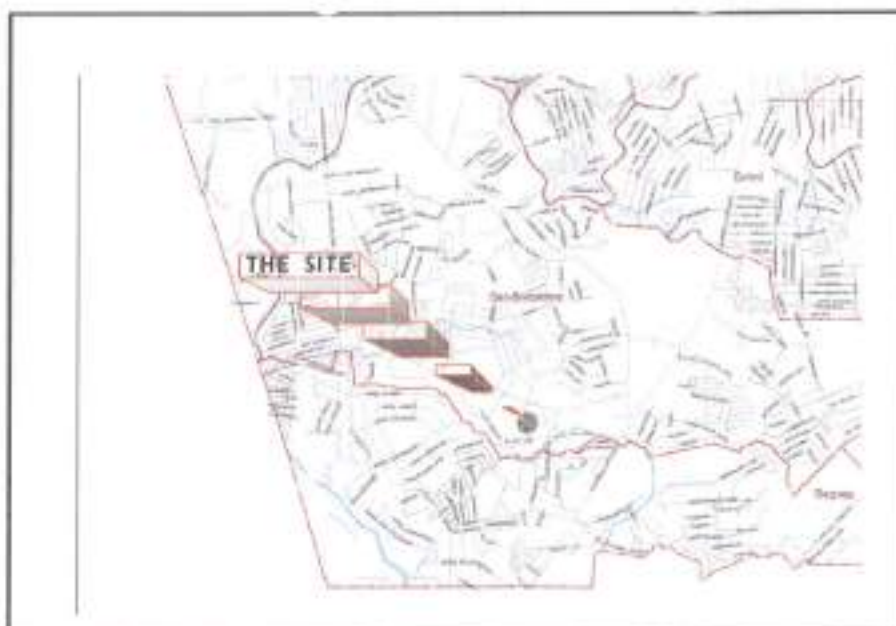
ALVIN FRANCIS C. ABON
Planning & Programming Division

Checked by:

JOCELYN A. MADONG
Planning & 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.]



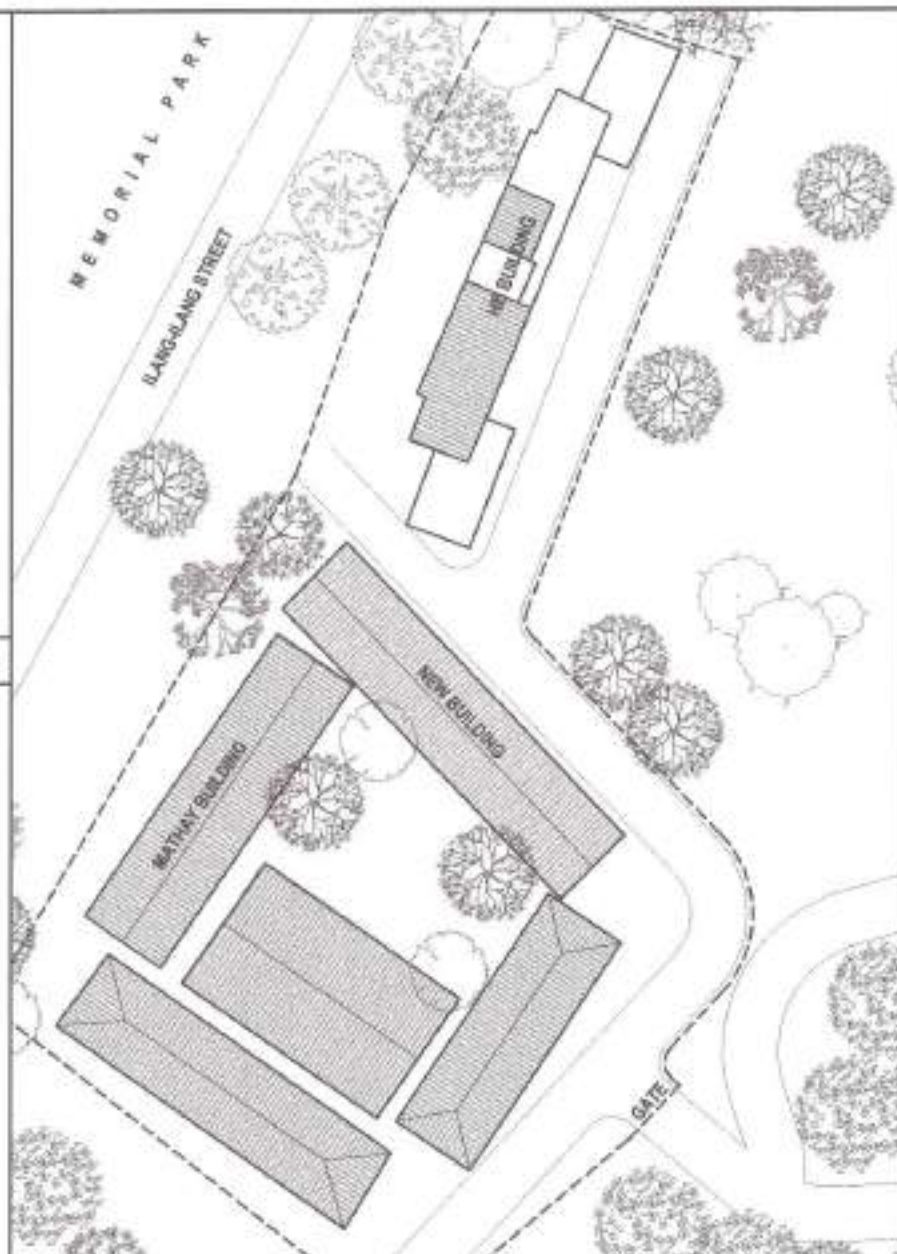
1 VICINITY MAP

SCALE : NTS



2 LOCATION MAP

SCALE : NTS



3 SITE DEVELOPMENT PLAN

SCALE : NTS

TABLE OF CONTENTS

ARCHITECTURAL

AR-01	LOCATION MAP
AR-02	VICINITY MAP
AR-03	SITE DEVELOPMENT PLAN
AR-04	GROUND FLOOR (EXISTING BUILDING)
AR-05	SECOND FLOOR (EXISTING BUILDING)
AR-06	THIRD FLOOR (EXISTING BUILDING)
AR-07	FOURTH FLOOR (EXISTING BUILDING)
AR-08	ELEVATION (EXISTING BUILDING)
AR-09	SCHEDULE OF WORKS AND MATERIALS
AR-10	GROUND FLOOR (NEW BUILDING)
AR-11	SECOND FLOOR (NEW BUILDING)
AR-12	THIRD FLOOR (NEW BUILDING)
AR-13	FOURTH FLOOR (NEW BUILDING)
AR-14	ROOF PLAN (NEW BUILDING)
AR-15	ROOF PLAN (NEW BUILDING)
AR-16	ELEVATION (NEW BUILDING)
AR-17	SCHEDULE OF WORKS AND MATERIALS
AR-18	GROUND FLOOR (NEW BUILDING)
AR-19	SECOND FLOOR (NEW BUILDING)
AR-20	THIRD FLOOR (NEW BUILDING)
AR-21	FOURTH FLOOR (NEW BUILDING)
AR-22	ROOF PLAN (NEW BUILDING)
AR-23	ELEVATION (NEW BUILDING)

PLUMBING

PL-01	GENERAL NOTE
PL-02	GROUND FLOOR WATER LINE LAYOUT
PL-03	SECOND FLOOR WATER LINE LAYOUT
PL-04	THIRD FLOOR WATER LINE LAYOUT
PL-05	FOURTH FLOOR WATER LINE LAYOUT
PL-06	GROUND FLOOR WATER LINE LAYOUT
PL-07	SECOND FLOOR WATER LINE LAYOUT
PL-08	THIRD FLOOR WATER LINE LAYOUT
PL-09	FOURTH FLOOR WATER LINE LAYOUT

ELECTRICAL

EL-01	GENERAL NOTE
EL-02	SITE DEVELOPMENT PLAN
EL-03	GROUND FLOOR WATER LINE LAYOUT
EL-04	SECOND FLOOR WATER LINE LAYOUT
EL-05	THIRD FLOOR WATER LINE LAYOUT
EL-06	FOURTH FLOOR WATER LINE LAYOUT
EL-07	GROUND FLOOR WATER LINE LAYOUT
EL-08	SECOND FLOOR WATER LINE LAYOUT
EL-09	THIRD FLOOR WATER LINE LAYOUT
EL-10	FOURTH FLOOR WATER LINE LAYOUT
EL-11	GROUND FLOOR WATER LINE LAYOUT
EL-12	SECOND FLOOR WATER LINE LAYOUT
EL-13	THIRD FLOOR WATER LINE LAYOUT
EL-14	FOURTH FLOOR WATER LINE LAYOUT
EL-15	GROUND FLOOR WATER LINE LAYOUT
EL-16	SECOND FLOOR WATER LINE LAYOUT
EL-17	THIRD FLOOR WATER LINE LAYOUT
EL-18	FOURTH FLOOR WATER LINE LAYOUT
EL-19	GROUND FLOOR WATER LINE LAYOUT
EL-20	SECOND FLOOR WATER LINE LAYOUT
EL-21	THIRD FLOOR WATER LINE LAYOUT
EL-22	FOURTH FLOOR WATER LINE LAYOUT



Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:

PROPOSED REHABILITATION OF SAN
BARTOLOME HIGH SCHOOL

LOCATION:

BARANGAY SAN BARTOLOME, DISTRICT 3, QUEZON CITY

DRAWN BY:

DATE:

DESIGNED BY:

REVISIONS:

SUBMITTED BY:

ENGR. LEO S. DEL ROSARIO

ENGR. LEO S. DEL ROSARIO

RECOMMENDING APPROVAL:

ENGR. SARANI R. VERZOSA, JR.

ENGR. SARANI R. VERZOSA, JR.

APPROVED BY:

HON. MA. JOSEFINA G. BELMONTE

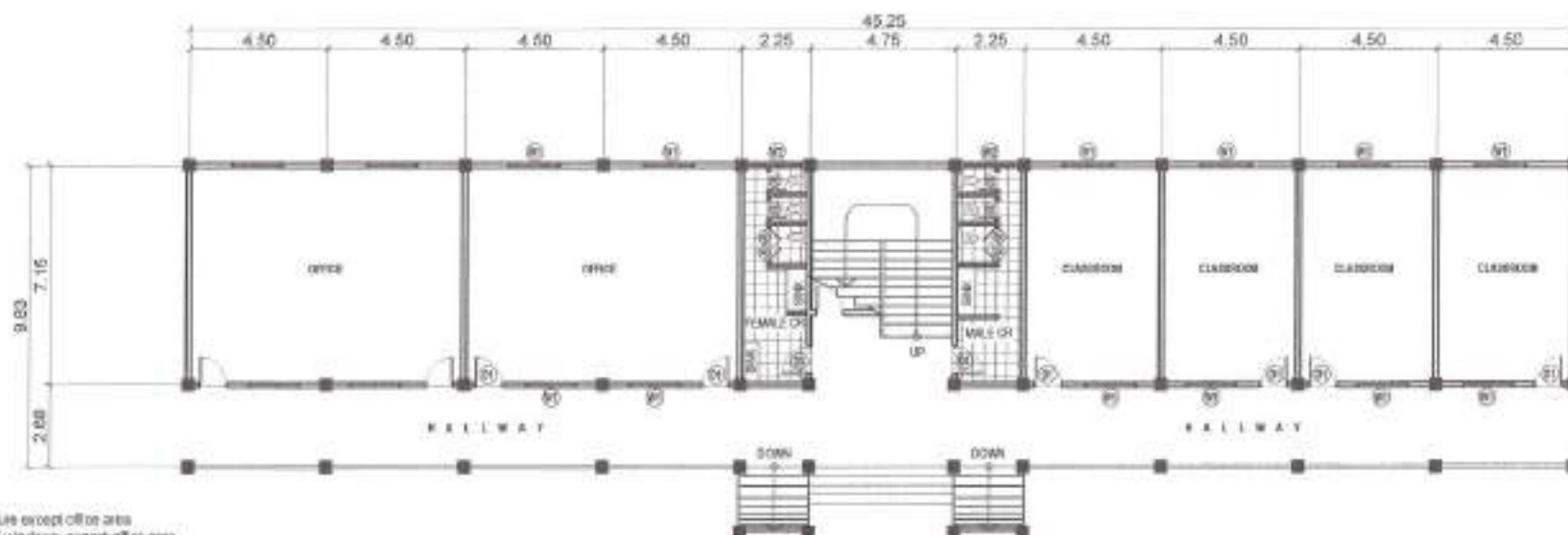
HON. MA. JOSEFINA G. BELMONTE

SHEET CONTENT:

LOCATION MAP
VICINITY MAP
SITE DEVELOPMENT PLAN

SHEET NO.

AR-01
0136



NOTE:

1. Repainting of whole structure except office area
2. Replacement of doors and windows except office area

1 GROUND FLOOR (MATHAY BUILDING)

NTS



NOTE:

1. Repainting of whole structure
2. Replacement of doors and windows
3. Installation of CHS wall with two sides plastering

2 SECOND FLOOR (MATHAY BUILDING)

NTS



Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:

PROPOSED REHABILITATION OF SAN
BARTOLOME HIGH SCHOOL

LOCATION:

BARANGAY SAN BARTOLOME, DISTRICT 5, QUEZON CITY

DRAWN BY:

DATE:

CHECKED BY:

REVISIONS:

SUBMITTED BY:

ENGR. LEO S. DEL ROSARIO
HEAD, PLANNING & PROGRAMS DIVISION

RECOMMENDING APPROVAL:

ENGR. ISAGANI C. VERZOSA, JR.
CHIEF, CITY ENGINEERING DEPARTMENT

APPROVED BY:

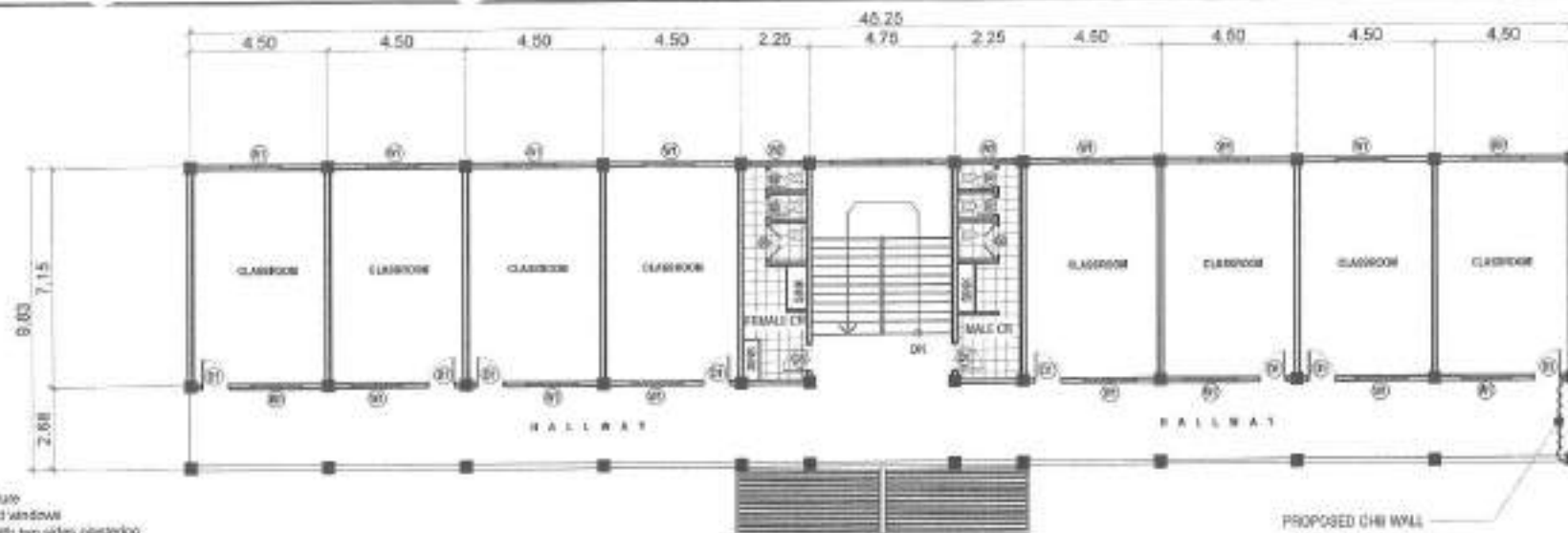
HON. MA. JOSEFINA G. BELMONTE
CITY ENGINEER

SHEET CONTENT:

GROUND FLOOR
(MATHAY BUILDING)
SECOND FLOOR PLAN
(MATHAY BUILDING)

SHEET NO.

AR-02
0236

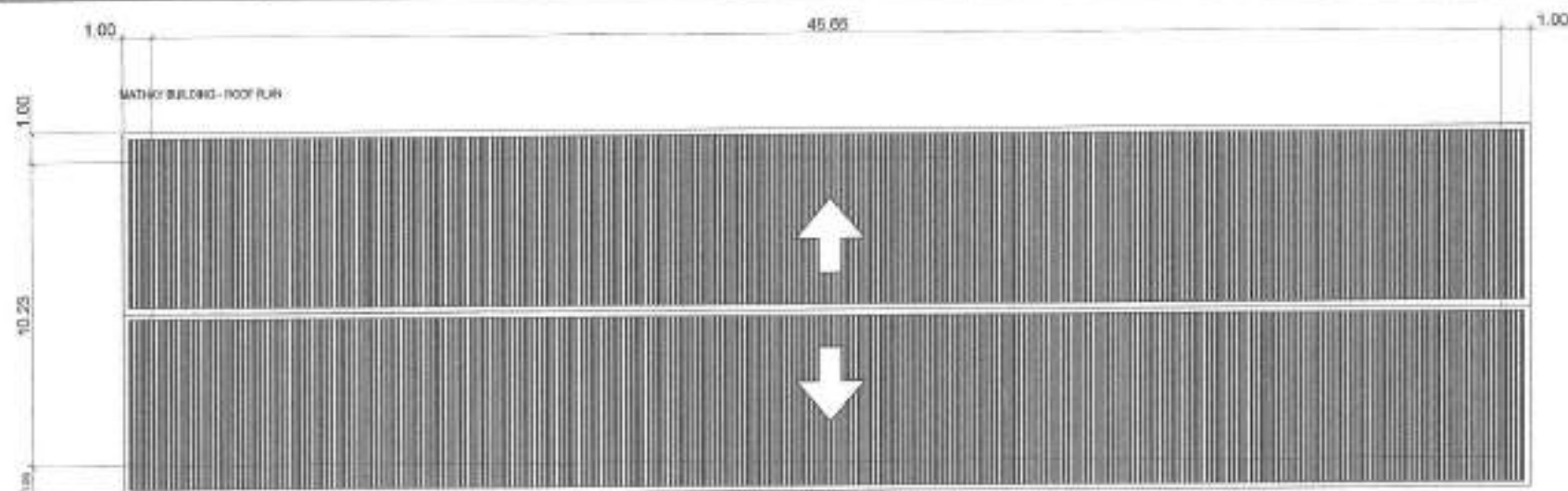


NOTE:

1. Repainting of whole structure
2. Replacement of doors and windows
3. Installation of CHI wall with two sides plastering
4. Replacement of Ceiling

1 THIRD FLOOR (MATHAY BUILDING)

NTS



NOTE:

1. Replacement of Gutter

2 ROOF PLAN (MATHAY BUILDING)

NTS



Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:

PROPOSED REHABILITATION OF SAN
BARTOLOME HIGH SCHOOL

LOCATION:

BARANGAY SAN BARTOLOME, DISTRICT 5, QUEZON CITY

DRAWN BY:

DATE:

CHECKED BY:

REVISION NO:

SUBMITTED BY:

ENGR. LEO S. DEL ROSARIO
REAL PLUMBING & REPAIRMENT SYSTEM

RECOMMENDING APPROVAL:

ENGR. ISAGAN R. VERZOSA, JR.
DC, CITY ENGINEERING DEPARTMENT

APPROVED BY:

HON. MA. JOSEFINA G. BELMONTE
CITY ENGINEER

SHEET CONTENT

THIRD FLOOR PLAN (MATHAY BUILDING)
ROOF PLAN (MATHAY BUILDING)

SHEET NO.

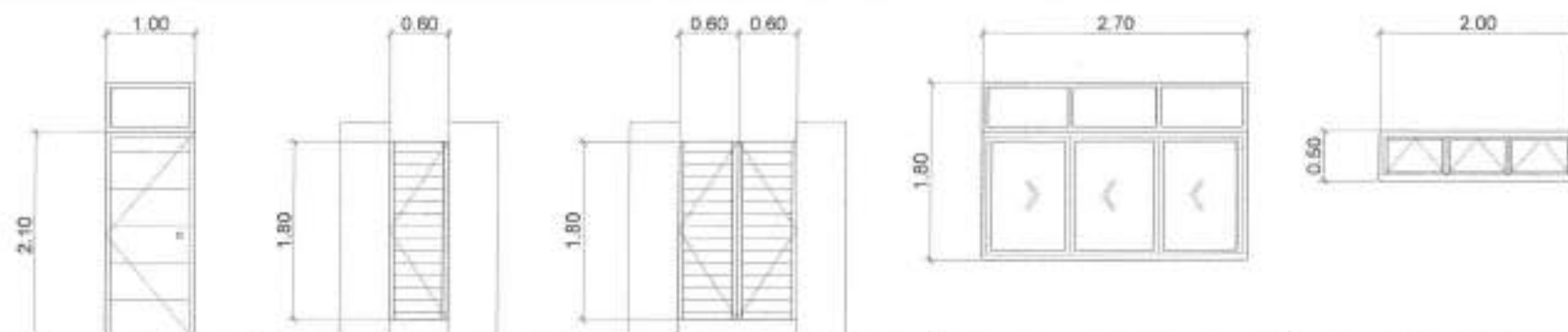
AR-03
0336



NOTE
1. Representing of whole structure

1 ELEVATION (MATHAY BUILDING)

NTS



TAG	(D1)	(D2)	(D3)	(W1)	(W2)
NO. OF SETS	12	12	6	1	1
SUBSCRIPTION	PANEL DOOR	PVC DOOR	PVC DOOR	ALUMINUM FRAMED GLASS WINDOW - BRICKA FINISH	ALUMINUM FRAMED GLASS WINDOW
LOCATION	CLASSROOM / TOILET ENTRANCE	CORRIDOR	CORRIDOR	CLASSROOM	TOILET
REMARKS	PROPOSED	PROPOSED	PROPOSED	PROPOSED	PROPOSED

2 SCHEDULE OF DOORS AND WINDOWS

NTS



Republika ng Pilipinas
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CITY ENGINEERING DEPARTMENT

PROJECT TITLE:

PROPOSED REHABILITATION OF SAN
BARTOLOME HIGH SCHOOL

LOCATION:

BARANGAY SAN BARTOLOME, DISTRICT 5, QUEZON CITY

DRAWN BY:

DATE:

CHECKED BY:

REVISIONS:

SUBMITTED BY:

ENGR. LEO S. DEL ROSARIO
104. LUNDA & ROSARIO ENGINEERS

RECOMMENDING APPROVAL:

ENGR. ISAGANI R. VERZOSA, JR.
104. CITY ENGINEERING DEPARTMENT

APPROVED BY:

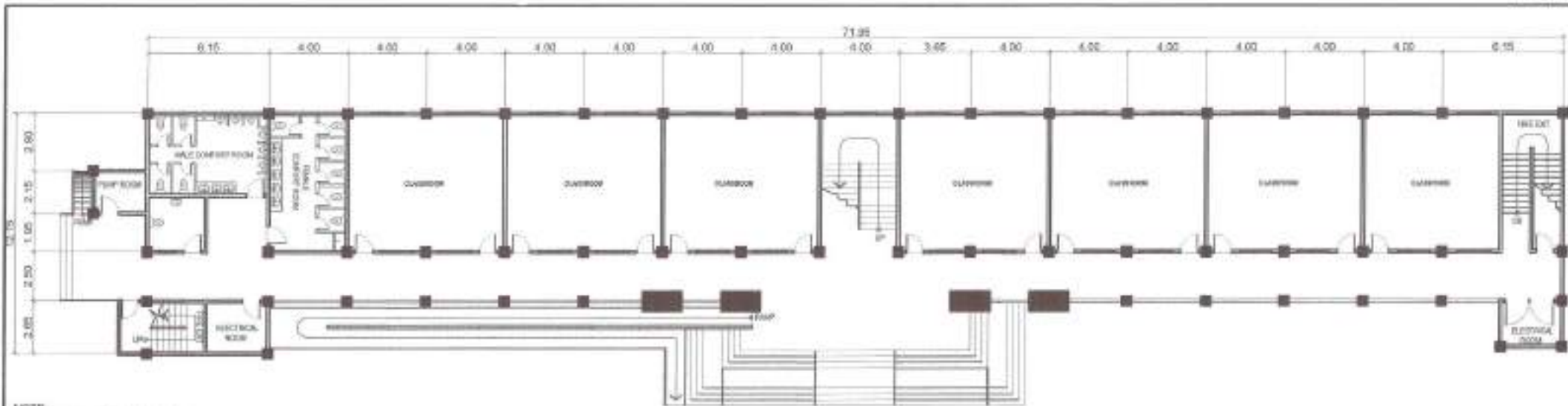
HON. MA. JOSEFINA G. BELMONTE
CITY ENGINEER

SHEET CONTENT

ILLUSTRATION (MATHAY BUILDING)
SCHEDULE OF DOORS AND WINDOWS

SHEET NO.

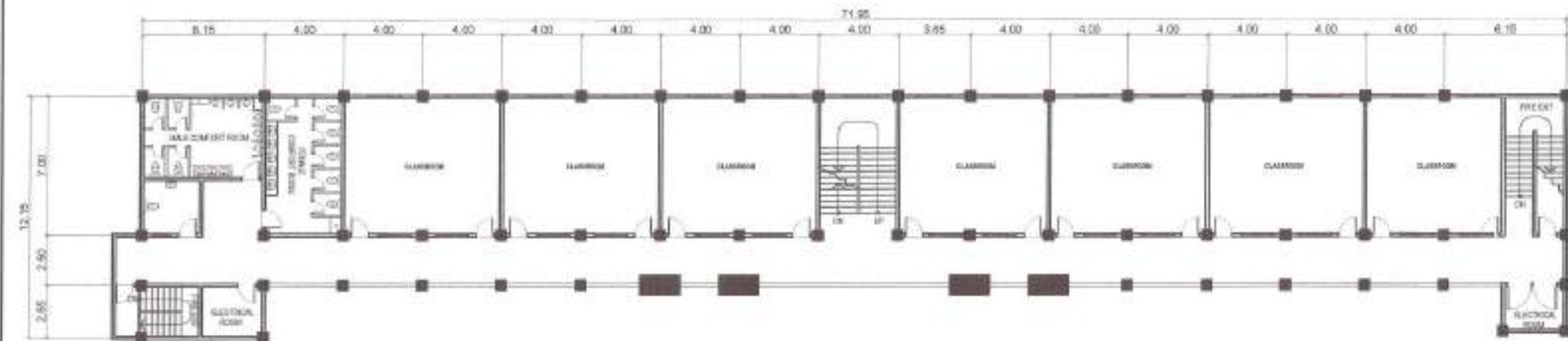
AR-04
0436



NOTE:
1. Repairing of whole structure

1	GROUND FLOOR (NEW BUILDING)
---	------------------------------

NTS



NOTE:
1. Reporting of whole structure

2 SECOND FLOOR (NEW BUILDING)

NTE



Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:

PROPOSED REHABILITATION OF SAN
BARTOLOME HIGH SCHOOL

BARANGAY SAN BARTOLOME, DISTRICT 4, QUEZON CITY

SPAWN INC.

DATE:

continued on p. 10

SUBMITTED BY:

ENGR. LEO S. DEL ROSARIO
HEAD, PLANNING & PROGRAMS DIVISION

RECOMMENDING APPROVAL

ENGR. ISAGANI R. VERZOSA, JR.
DIE, CITY ENGINEERING DEPARTMENT

APPROVED BY:

HON. MA. JOSEFINA G. BELMONTE
(SPY BAKER)

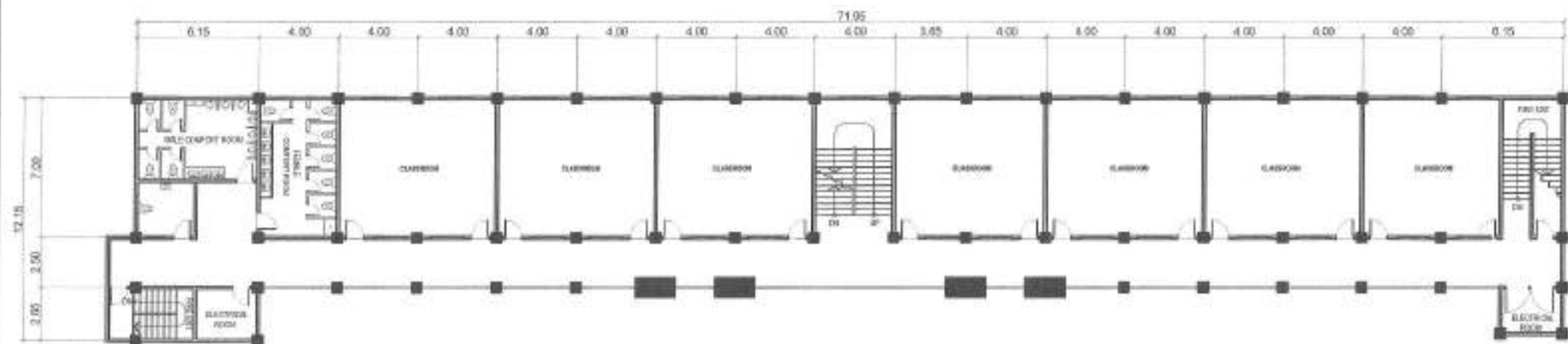
SHEET CONTENT

2000-2001
2001-2002
2002-2003
2003-2004

SHEET NO.

AR-05
0536

NTG







NTS



1	ROOF DECK (NEW BUILDING)
---	----------------------------

The architectural floor plan shows a rectangular building layout. A central rectangular area is shaded with a stippled pattern and labeled "CONCRETE SLAB". To the left of this slab, there is a staircase area with a vertical dimension of 12.10. The building has a total width of 71.05. The plan is divided into several sections with horizontal dimensions: 6.15, 4.00, 4.00, 4.00, 4.00, 4.05, 4.00, 4.00, 4.00, 4.00, 3.05, 4.00, 4.00, 4.00, 4.00, 4.00, 4.00, and 6.15. Vertical dimensions on the left side are 7.00, 2.50, and 2.05. The plan also shows a long horizontal corridor at the bottom with three small rectangular structures (possibly elevators or service areas) and a staircase at the bottom left corner.

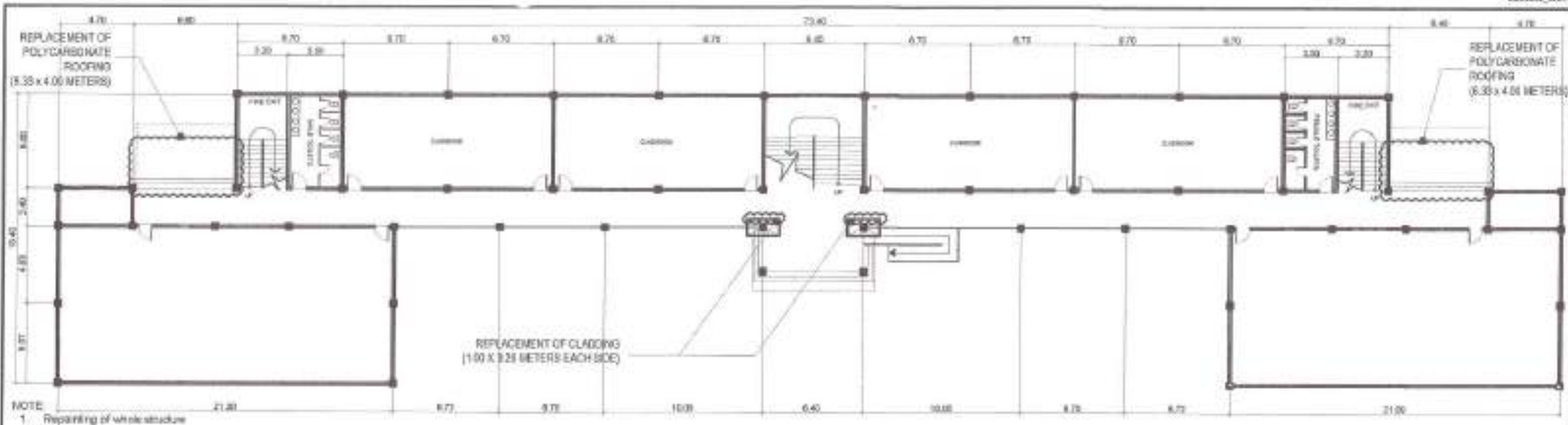
2 | ROOF PLAN (NEW BUILDING)

 <p>Republika ng Pilipinas Lungsod ng Quezon CITY ENGINEERING DEPARTMENT</p>	PROJECT TITLE:	DRAWN BY:	SUBMITTED BY:	RECOMMENDING APPROVAL:	APPROVED BY:	SHEET CONTENT	SHEET NO.
	PROPOSED REHABILITATION OF SAN BARTOLOME HIGH SCHOOL	DATE:	 ENGR. LEO S. DEL ROSARIO <small>ENGR., PLANNING & PROGRAMMING DIVISION</small>	 ENGR. ISAGANI R. VERZDOSA, JR. <small>SEC. CITY ENGINEERING DEPARTMENT</small>	HON. MA. JOSEFINA G. BELMONTE <small>CITY MAYOR</small>	<small>PROF. ENG. DRAW BUILDING PROF. PLAN (EACH SHEET)</small>	
	LOCATION: BARANGAY SAN BARTOLOME, DISTRICT 5, QUEZON CITY	CHECKED BY:				REVISION NO.	

NT-19

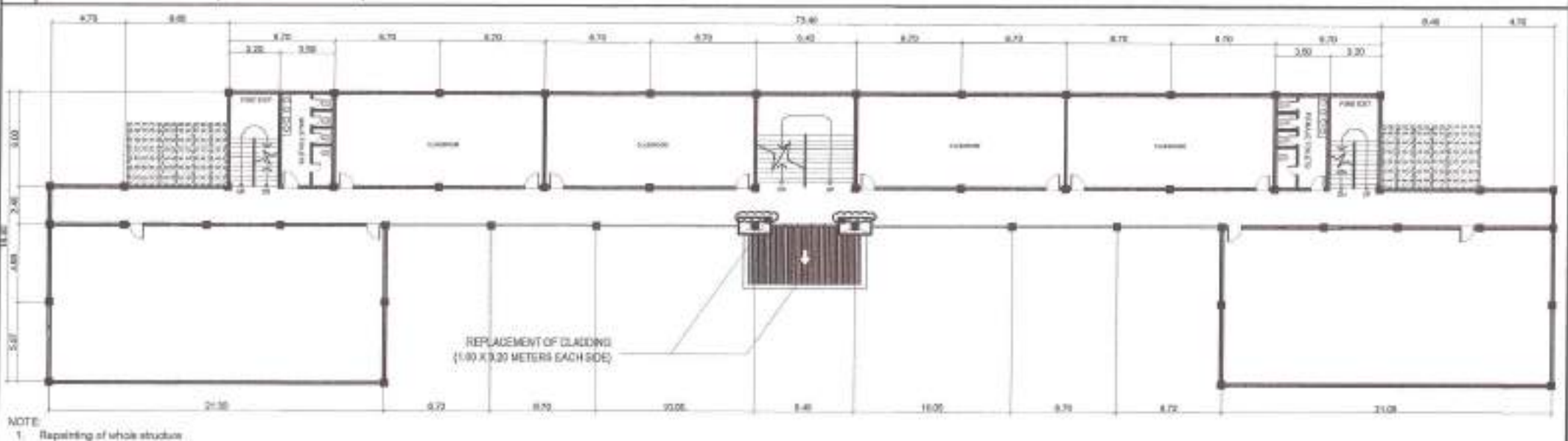


AR-08
0836





1 GROUND FLOOR (HB BUILDING)

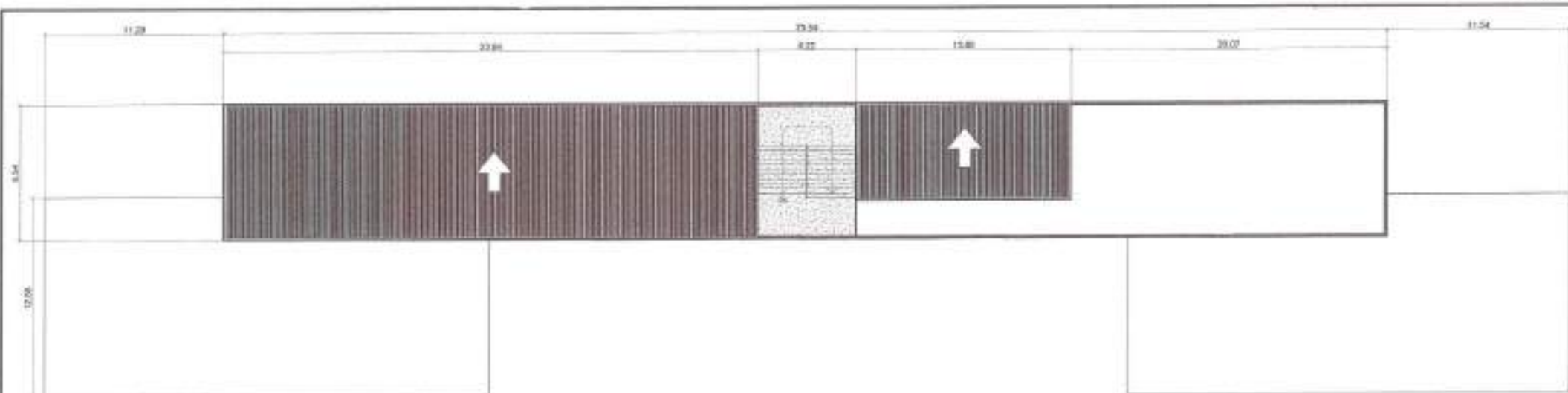
NTS



2 SECOND FLOOR (HB BUILDING)

NTS

 <p>Republika ng Pilipinas Lungsod ng Quezon CITY ENGINEERING DEPARTMENT</p>	PROJECT TITLE:	DRAWN BY:	SUBMITTED BY:	RECOMMENDING APPROVAL:	APPROVED BY:	SHEET CONTENT	SHEET NO.
	PROPOSED REHABILITATION OF SAN BARTOLOME HIGH SCHOOL	DATE:				GROUND FLOOR (HB BUILDING)	
	LOCATION: BARANGAY SAN BARTOLOME, DISTRICT 6, QUEZON CITY	DESIGNED BY:	ENGR. LEO S. DEL ROSARIO HEAD, PLANNING & DESIGN DIVISION	ENGR. ISABELA R. VERZOSA, JR. CH. CITY ENGINEER (PLANNING)	HON. MA. JOSEFINA G. BELMONTE CITY ENGINEER	SECOND FLOOR (HB BUILDING)	
		REVISION NO.:					

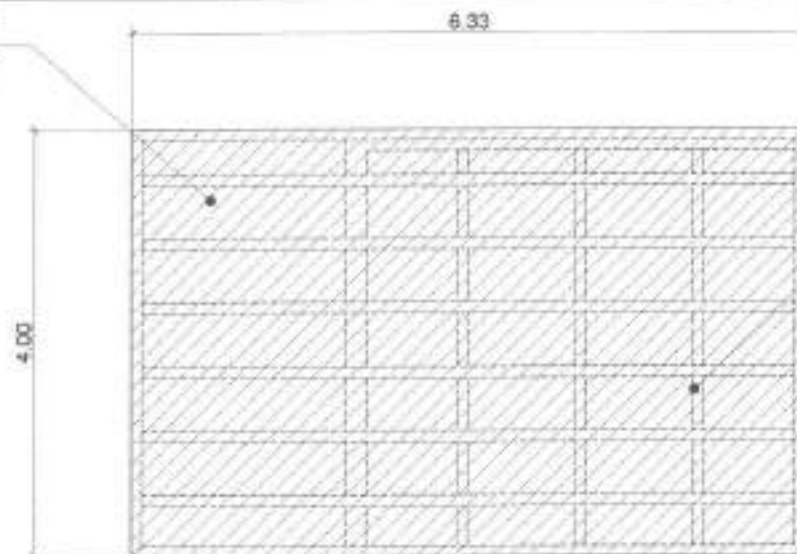


NOTE:

1. Repainting of whole structure
2. Replacement of inside gutter

1 ROOF PLAN (HB BUILDING)

NTS

REPLACEMENT OF
POLYCARBONATE
ROOFING

EXISTING TUBULAR BAR FRAMES

2 CANOPY DETAILS

NTS



Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:

**PROPOSED REHABILITATION OF SAN
BARTOLOME HIGH SCHOOL**

LOCATION:

BARANGAY SAN BARTOLOME, DISTRICT 5, QUEZON CITY

DRAWN BY:

DATE:

CHECKED BY:

REVISIONS:

SUBMITTED BY:

ENGR. LEO S. DEL ROSARIO
HEAD, PLUMBING & ROOFING DIVISION

RECOMMENDING APPROVAL:

ENGR. ISAGANI R. VERZOSA, JR.
DEPUTY CITY ENGINEERING COMMISSIONER

APPROVED BY:

HON. MA. JOSEFINA G. BELMONTE
CITY ENGINEER

SHEET CONTENT

ROOF PLAN (HB BUILDING)
(MAINTENANCE)

SHEET NO.





AR-11
11/36



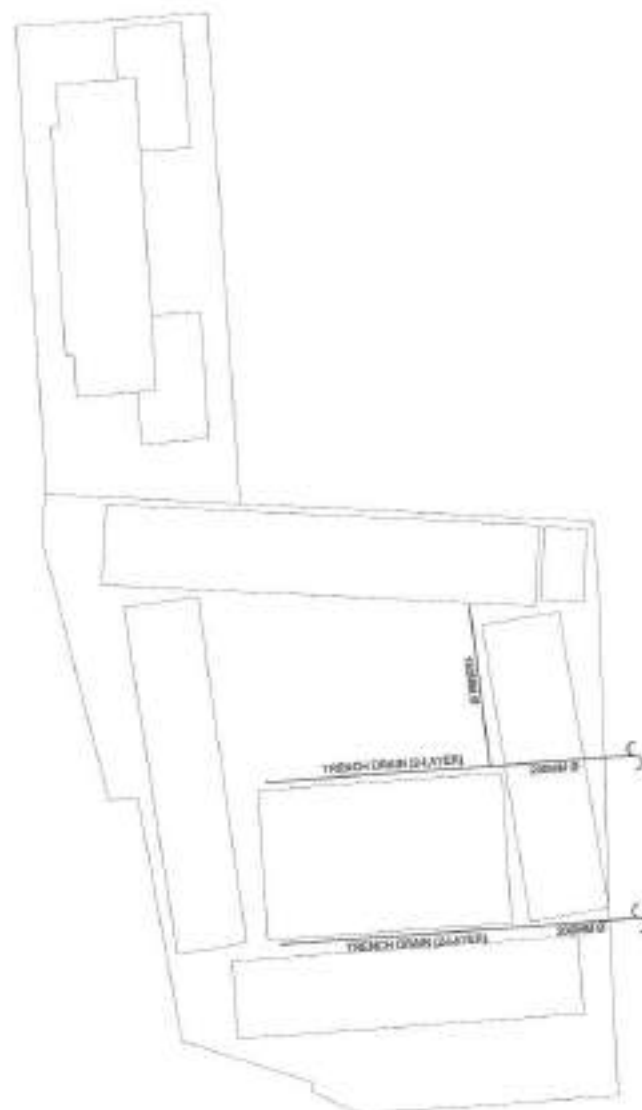
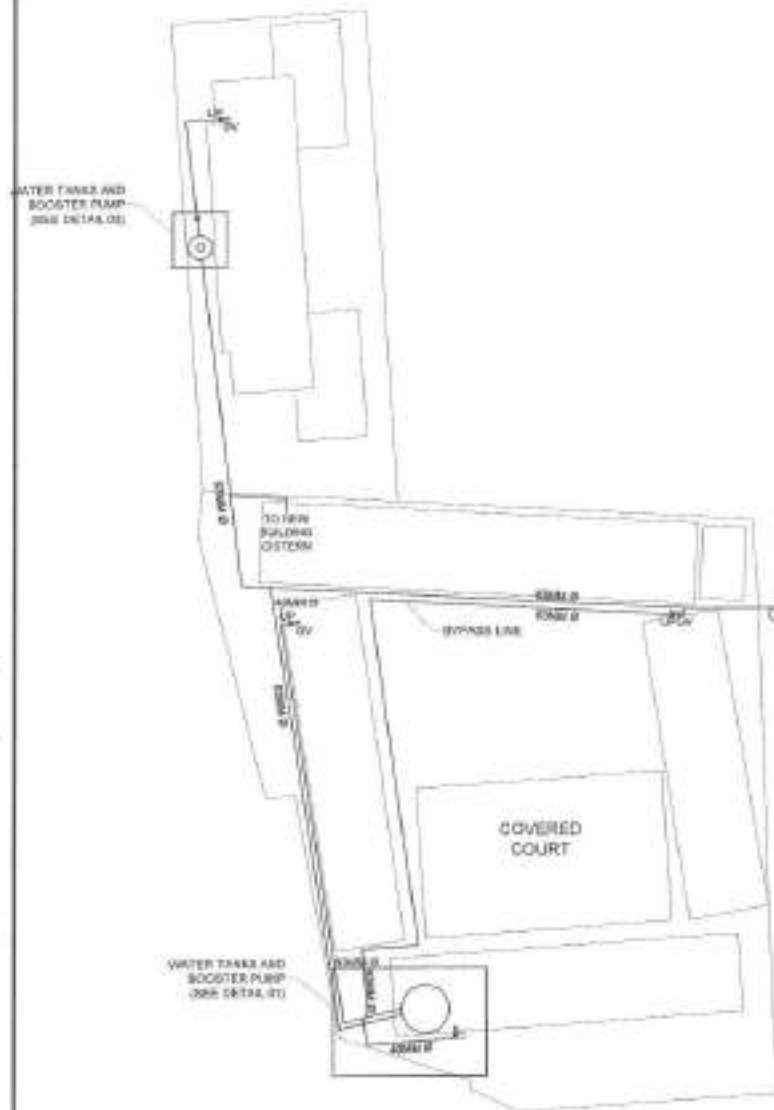
NOTE:
1. Repainting of whole structure

1 FRONT ELEVATION (HB BUILDING)

NTS

 <p>Republika ng Pilipinas Lungsod ng Quezon CITY ENGINEERING DEPARTMENT</p>	PROJECT TITLE:	DRAWN BY:	SUBMITTED BY:	RECOMMENDING APPROVAL:	APPROVED BY:	SHEET CONTENT	SHEET NO.
	PROPOSED REHABILITATION OF SAN BARTOLOME HIGH SCHOOL	DATE:	 ENGR. LEO S. DEL ROSARIO <small>HEAD, PLANNING & PROGRAMMING DIVISION</small>	 ENGR. ISAGANI R. VERZOSA, JR. <small>DEPUTY CITY ENGINEERING DEPARTMENT</small>	HON. MA. JOSEFINA G. BELMONTE <small>CITY ENGINEER</small>	ELEVATION (FRONT VIEW)	
	LOCATION:	CHECKED BY:					
	BARANGAY SAN BARTOLOME, DISTRICT 5, QUEZON CITY	REVISION NO.:					

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 THE CITY.
2. ALL WORKS SHALL BE SUPERVISED BY A REGISTERED PROFESSIONAL RELATED TO THE ACTIVITIES TO BE 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 DISCREPANCIES ARE 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 INVOLVED. 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 ENBEDDED IN STRUCTURAL MEMBERS, UNLESS OTHERWISE APPROVED.
11. ALL PIPES, FITTINGS, EQUIPMENT AND FIXTURES 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 HANDERS 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 EQUIPMENT.
 - 15.3. WATER METER SHALL BE ANY BRAND AND ACCEPTED BY THE WATER UTILITY COMPANIES. 15.4. ALL WATER PIPES EXPOSED TO WEATHER (CONDUITS) SHALL BE MADE OF GL.
16. STORM DRAIN
 - 16.1. ALL STORM DRAINAGE SLOPE SHALL BE WITHIN 0.3M TO 0.5M.
 - 16.2. STORM DRAINAGE LINE 200MM AND BELOW SHALL BE PVC, 250MM AND 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 POLYETHYLENE GLASS REINFORCED 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 FITTURE SHALL BE SUPPLIED WITH APPROPRIATE VENTILATION.
18. FIXTURES
 - 18.1. WATER CLOSETS SHALL BE FREE STANDING TOILET COMBINATIONS, ROUND FRONT BOTTOM OUTLET Siphon Vortex OR WASH DOWN GONGS WITH EXTENDED REAR BUMP 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 SEAT 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 INTERNAL PLUMB SPREADER, CONCEALED WALL HANGER POCKETS, 25MM TOP FLUSH 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 BRASS TYPE, MODULAR 150MM X 150MM AND PROVIDED WITH DETACHABLE STAINLESS BRASS, 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 REEL 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 300MM HICK TYPE WITH COMPLETE ACCESSORIES.



1 GENERAL NOTES

SCALE : NTS

2 GROUNDS WATER LINE LAYOUT

SCALE : NTS

3 GROUNDS STORM DRAINAGE LAYOUT

SCALE : NTS



Republic of the Philippines
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:
PROPOSED REHABILITATION OF SAN BARTOLOME HIGH SCHOOL
LOCATION:
BAPANGAY SAN BARTOLOME, DISTRICT 3, QUEZON CITY

DRAWN BY:
DATE:
CHECKED BY:
REVIEWED BY:

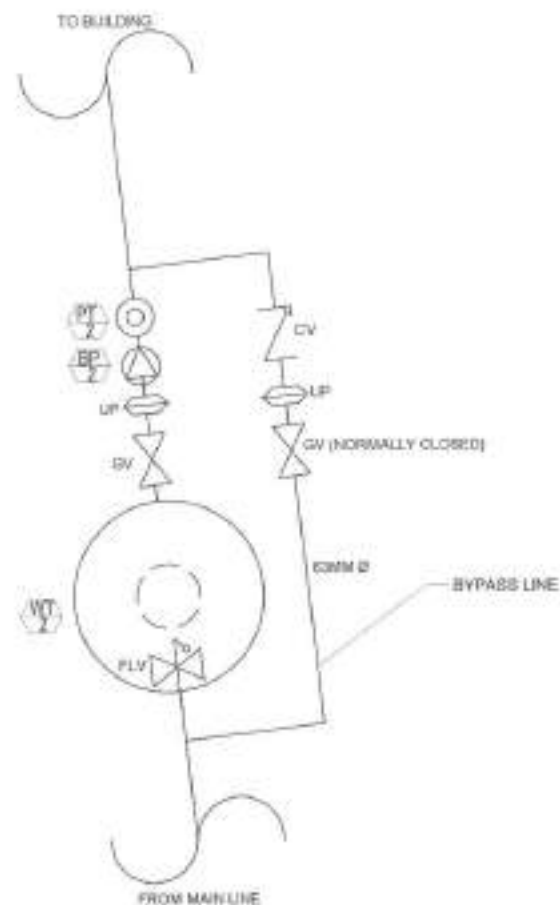
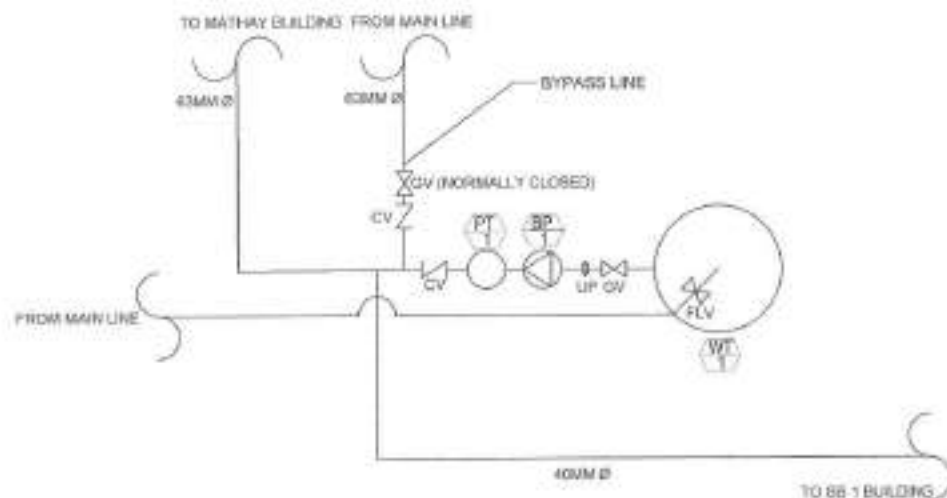
SUBMITTED BY:
ENGR. LEO S. DEL ROSARIO
1801002_00414

RECOMMENDING APPROVAL:
ENGR. ISABELA R. VERZOSA, JR.
1801002_00414

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

SHEET CONTENT:
GROUND WATER LINE LAYOUT
GROUND STORM DRAINAGE LAYOUT

SHEET NO.
PL-01
13/36



1 BOOSTER PUMP DETAIL 1

SCALE : NTS

2 BOOSTER PUMP DETAIL 2

SCALE : NTS



Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:
**PROPOSED REHABILITATION OF SAN
BARTOLOME HIGH SCHOOL**

CREATOR:
BARANGKAY SAN BARTOLOME, DISTRICT 5, QUEZON CITY

DESIGNED BY:
DATE:
CHECKED BY:
REVISIONS:

SUBMITTED BY:

ENGR. LEO S. DEL ROSARIO
HEAD, PLANNING AND DESIGN DIVISION

RECOMMENDING APPROVAL:

ENGR. ISAGANI R. VERZOSA, JR.
HEAD, CIVIL ENGINEERING DIVISION

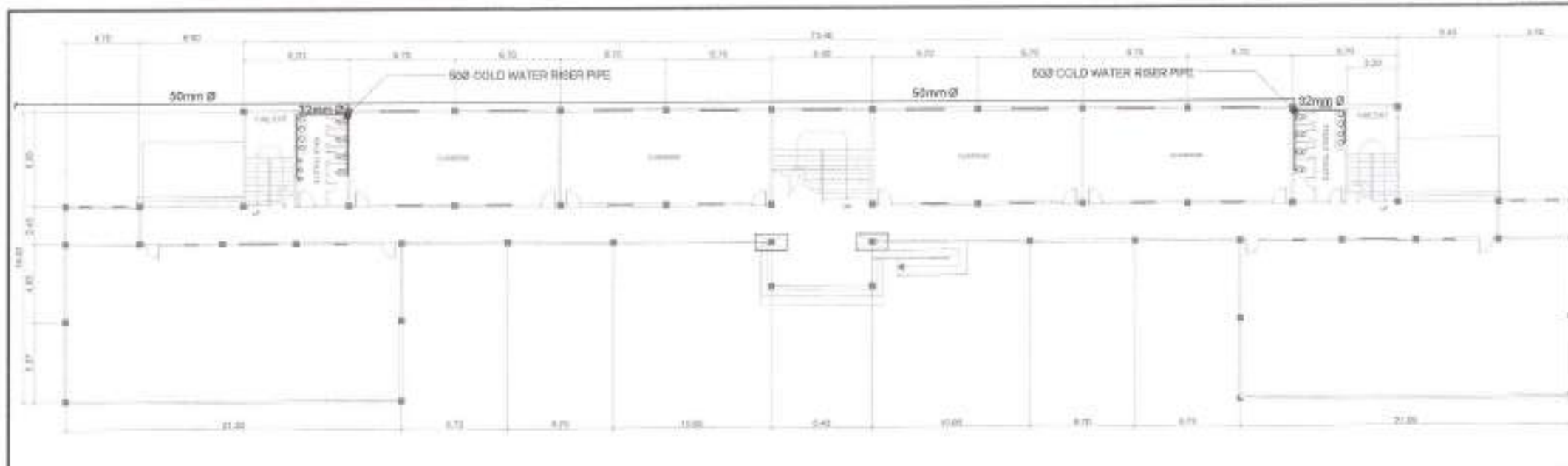
APPROVED BY:

HON. MA. JOSEFINA G. BELMONTE
CITY ENGINEER

SHEET CONTENT
BOOSTER PUMP DETAIL 1
BOOSTER PUMP DETAIL 2

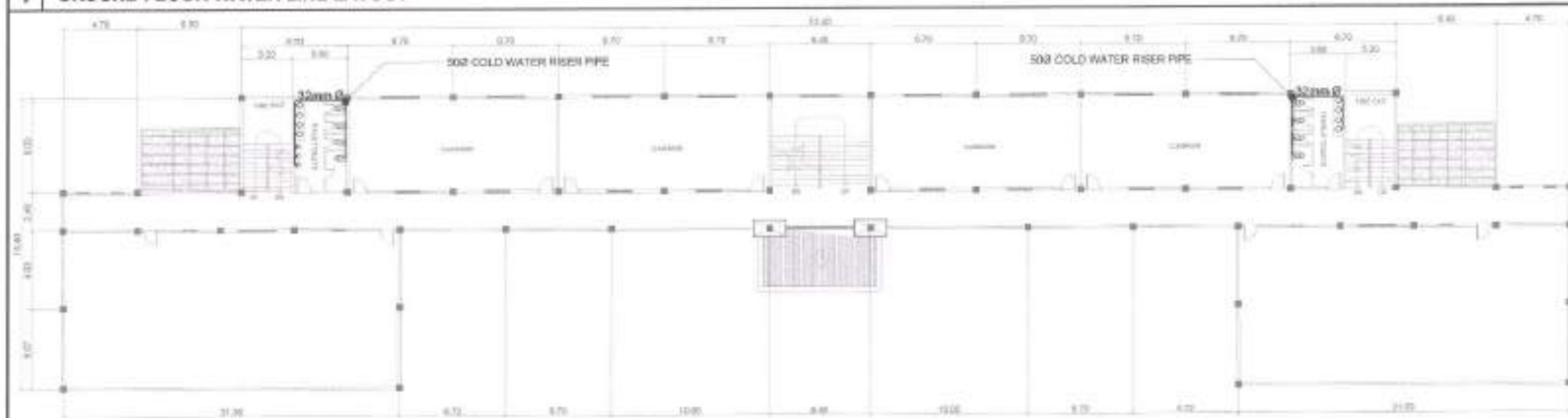
SHEET NO.

PL-02
14/36



1 GROUND FLOOR WATER LINE LAYOUT

SCALE : NTS



2 SECOND FLOOR WATER LINE LAYOUT

SCALE : NTS



Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:
**PROPOSED REHABILITATION OF SAN
BARTOLOME HIGH SCHOOL**
LOCATION:
BARANGAY SAN BARTOLOME, DISTRICT 5, QUEZON CITY

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

SUBMITTED BY:

ENGR. LEO S. DEL ROSARIO
REG. PROFESSIONAL CIVIL ENGINEER

RECOMMENDING APPROVAL:

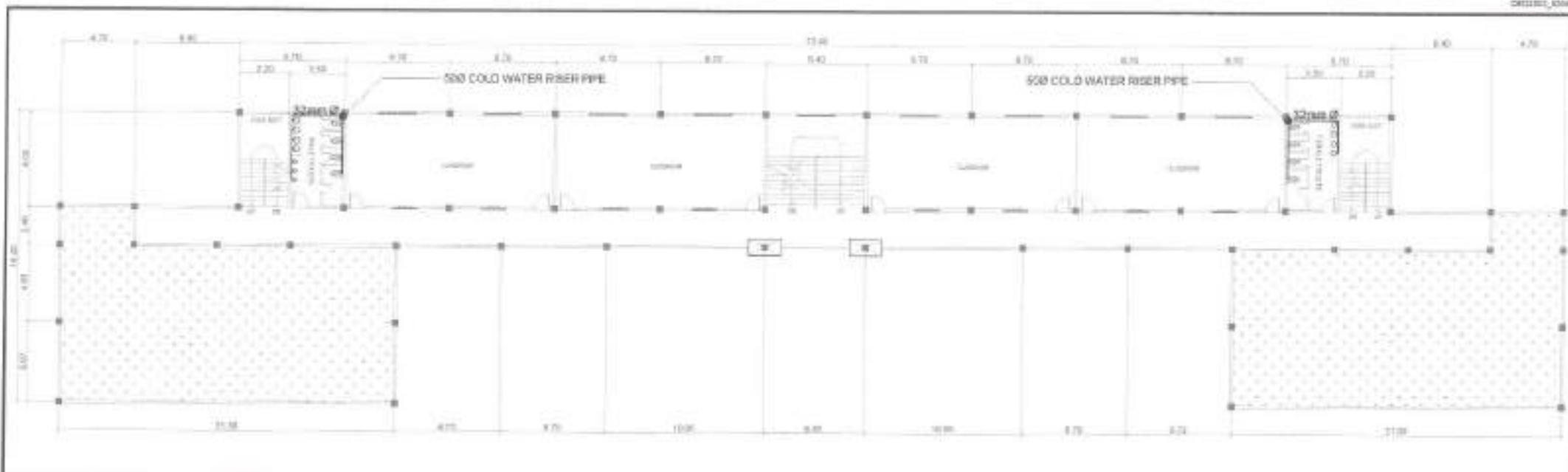
ENGR. ISAGANI R. VERZOSA, JR.
REG. CIVIL ENGINEER

APPROVED BY:

HON. MA. JOSEFINA G. BELMONTE
CITY ENGINEER

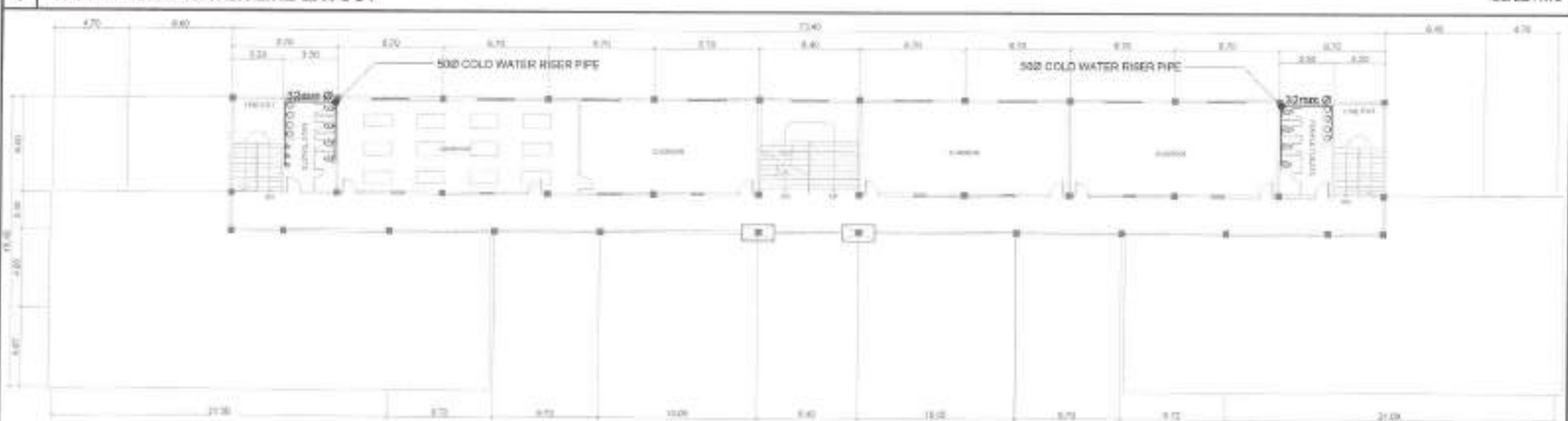
SHEET CONTENT:
GROUND FLOOR WATER LINE
SECOND FLOOR WATER LINE
REBUILDING

SHEET NO.:
**PL-03
1536**



1 THIRD FLOOR WATER LINE LAYOUT

SCALE : NTS



2 FOURTH FLOOR WATER LINE LAYOUT

SCALE : NTS



Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:

**PROPOSED REHABILITATION OF SAN
BARTOLOME HIGH SCHOOL**

LOCATION:

BARANGAY SAN BARTOLOME, DISTRICT 5, QUEZON CITY

DRAWN BY:

DATE

CHECKED BY:

PERMISSION:

SUBMITTED BY:

ENGR. LEO S. DEL ROSARIO
HEAD, PLANNING & PROGRAMS DIVISION

RECOMMENDING APPROVAL:

ENGR. ISAGANI R. VERZOSA, JR.
DEPUTY CITY ENGINEER

APPROVED BY:

HON. MA. JOSEFINA G. BELMONTE
CITY ENGINEER

SHEET CONTENT

SANITIZATION PROJECT
NO. 1 BUILDING
FOURTH FLOOR WATER LINE
LAYOUT (THIS SHEET)

SHEET NO.

**PL-04
16/36**

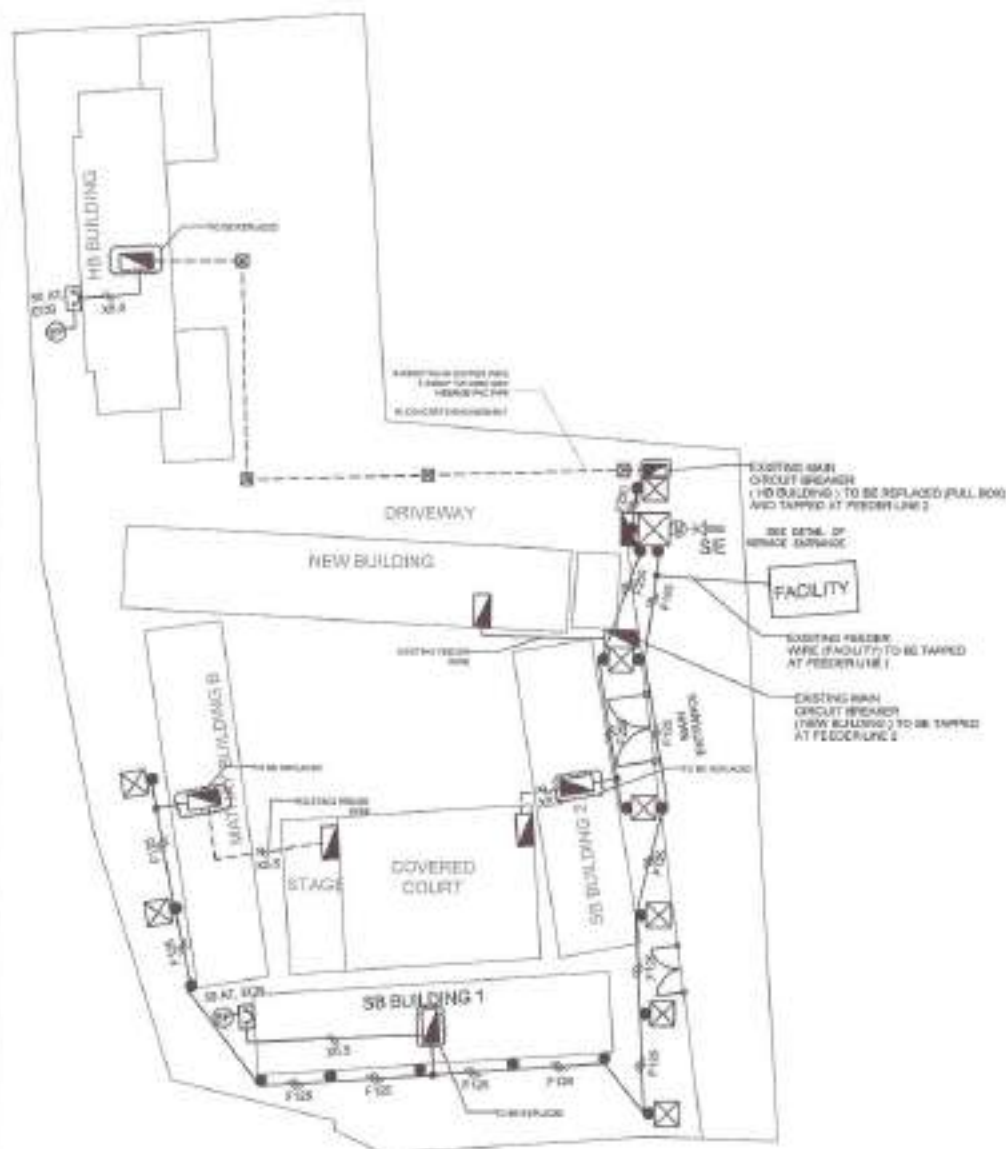
GENERAL NOTES FOR THREE-PHASE SYSTEM

- 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.
- ALL WORKS SHALL BE SUPERVISED BY A REGISTERED PROFESSIONAL RELATED TO THE ACTIVITIES BEING UNDERTAKEN.
- ALL WORKS SHALL BE COORDINATED WITH THE RESPECTIVE TRADES SO TO AVOID CONFLICTS DURING EXECUTION OF ACTIVITIES.
- ALL NECESSARY PERMITS SHALL BE SECURED AND TURNED OVER TO THE CITY.
- ALL DRAWINGS AND SPECIFICATIONS SHALL BE CORRECTLY REVIEWED BY THE CONTRACTOR AND SHALL IMMEDIATELY BE INFORMED IF DISCREPANCY (S) FOUND HEREIN.
- ALL DIMENSIONS, ELEVATIONS AND REFERENCES, SHALL BE VERIFIED WITH THE ACTUAL CONDITION PRIOR TO EXECUTION.
- SHOP DRAWINGS SHALL BE PROVIDED AS NECESSARY PRIOR TO THE EXECUTION.
- ALL WORKS SHALL BE TESTED AND COMMISSIONED AS INDICATED IN THE SPECIFICATIONS WITH THE PRESENCE OF ALL PARTIES INVOLVED. RESULTS SHALL BE DOCUMENTED PROPERLY.
- ALL PIPES AND LAYOUT ARE ONLY DIAGNAMATIC. ACTUAL LAYOUT OF PIPES AND FITTINGS, UNLESS OTHERWISE REQUIRED, SHALL BE PROPERLY CONCEALED.
- NO PIPES SHALL BE ALLOWED TO BE EMBEDDED IN STRUCTURAL MEMBERS, UNLESS OTHERWISE APPROVED.
- ALL PIPES, FITTINGS, EQUIPMENT AND FIXTURES SHALL BE INSTALLED IN ACCORDANCE TO MANUFACTURERS SPECIFICATIONS AND INSTRUCTIONS.
- SUPPORTS AND HANGERS SHALL BE PROVIDED ACCORDINGLY.
- ALL EQUIPMENTS AND FIXTURES SHALL BE ENVIRONMENTAL FRIENDLY.
- INSTALLATION OF SERVICE ENTRANCE
 - THE TYPE OF SERVICE ENTRANCE SHALL BE THREE-PHASE, THREE-WIRE PLUS GROUND, 60 HERTZ, 200V AC NOMINAL.
 - THE SERVICE ENTRANCE EQUIPMENT SHALL BE PROPERLY GROUNDED IN ACCORDANCE WITH THE PHILIPPINE ELECTRICAL CODE.
 - THE MAIN OVERCURRENT PROTECTION DEVICE SHALL BE OF THERMAL MAGNETIC MOCB IN NEMA 3R WEATHERPROOF ENCLOSURE.
- INSTALLATION OF LIGHTING AND POWER SYSTEM
 - ALL LIGHTING AND CONVENIENCE OUTLET CIRCUITS SHALL BE 3.5 SQ. MM. THINWALL 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

- ALL EMBEDDED BRANCH CIRCUITS SHALL BE PVC CONDUITS AND FOR EXPOSED INSTALLATION SHALL BE IMC SUPPORTED BY CONDUIT CLAMPS EVERY 750 MILLIMETERS AND/OR CONDUIT HANGER SUPPORTS EVERY 1500 MILLIMETERS.
- 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.
- ALL POWER OUTLETS AND SWITCHES SHALL BE GROUNDING TYPE WITH PARALLEL SLOTS FOR 230 V.
- PROVIDE GROUND FAULT CURRENT INTERRUPTER CIRCUIT BREAKER FOR LOADS MARKED "GFCI" ON THE PLAN.
- ALL METALLIC CONDUITS, SWITCHES, LIGHTING FIXTURES, PANELBOARDS, EQUIPMENTS AND NON-CURRENT CARRYING METAL PARTS SHALL BE PROPERLY GROUNDED AND BONDED.
- THE GROUND RESISTANCE SHALL NOT BE MORE THAN 5 OHMS.
- ALL MOUNTING HEIGHTS FOR WALL MOUNTED DEVICES SHALL BE AS FOLLOWS:
 - LIGHTING SWITCH - 1400 MM ABOVE FLOOR FINISH
 - CONVENIENCE OUTLET - 300 MM ABOVE FLOOR FINISH
 - PANELBOARD AND CABINETS - 1400 MM ABOVE FLOOR FINISH
 - EXIT LIGHT - 100 MM TOP OF DOOR JAMB
 - EMERGENCY LIGHT - 2000 ABOVE FLOOR FINISH

- PULL BOXES SHALL BE WHENEVER NECESSARY TO FACILITATE WIRE PULLING EVEN IF THESE ARE NOT INDICATED ON PLANS.
- 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 X 150MM X 100MM.
- 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.
- FEEDER AND BRANCH CIRCUIT CONDUCTORS IN CABLE TRAYS SHALL BE GROUPED, BONDED AND TAPPED TO INDICATE CLEARLY THE ELECTRICAL CHARACTERISTICS SUCH AS CIRCUIT NUMBER AND PANEL DESIGNATION.
- 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.
- ALL MATERIALS TO BE USED AND THE EQUIPMENT TO BE INSTALLED SHALL BE OF THE BEST QUALITY, BRAND NAME AS SPECIFIED. IT MUST BE APPROVED TYPE FOR THE PARTICULAR LOCATION AND PURPOSE INTENDED.



1 GENERAL NOTES

1 SITE DEVELOPMENT PLAN AND FEEDER LAYOUT

NOT TO SCALE



Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:

PROPOSED REHABILITATION OF SAN
BARTOLOME HIGH SCHOOL

LOCATION:

BARANGAY SAN BARTOLOME, DISTRICT 5, QUEZON CITY

DRAWN BY:

DATE:

CHECKED BY:

REVISIONS:

SUBMITTED BY:

ENGR. LEO S. DEL ROSARIO
HEAD, PLUMBING & MECHANICAL DIVISION

RECOMMENDING APPROVAL:

ENGR. ISAGANI R. VERZOSA, JR.
SENIOR ENGINEERING OFFICER

APPROVED BY:

HON. MA. JOSEFINA G. BELMONTE
CITY ENGINEER

SHEET CONTENT

VERIFY MAP
LOCATION/DATE
SITE DEVELOPMENT
PLAN AND FEEDER
LAYOUT

SHEET NO.

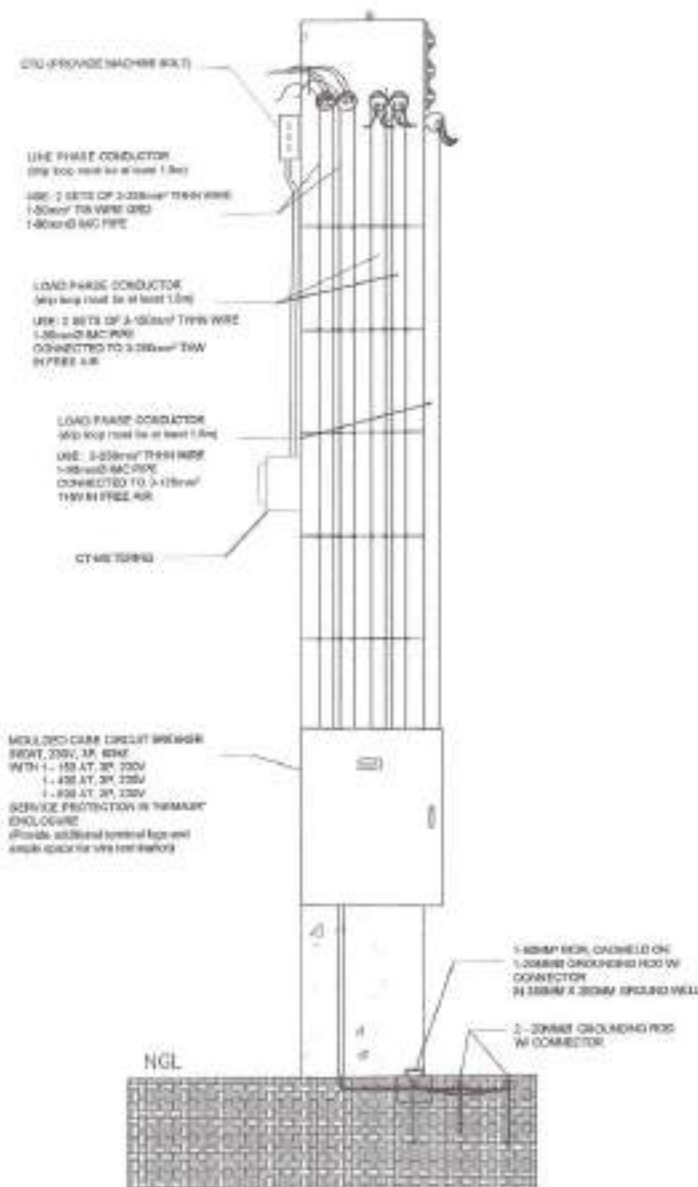
EL-01
17/36

LEGEND:

	PROPOSED THREE WIRE NEUTRAL LINE		SURFACE MOUNTED BOX TYPE LIGHTING FIXTURE WITH 1-10W DAYLIGHT LED TUBE
	BRANCH LINE FROM BUILDING TO ACP		SURFACE MOUNTED BOX TYPE LIGHTING FIXTURE WITH 3-10W DAYLIGHT LED TUBE
	EXISTING METAL FUNGUS		CIRCUIT FAN
	METAL FUNGUS (FOR REPLACEMENT)		CONVENIENCE OUTLET WITH GROUND, TWO-CARD
	EXISTING DISTRIBUTION POST		EMERGENCY LIGHT
	TAPPING POINT		SWITCH SINGLE POLE
	3-WIRE, SECONDARY RACK		SWITCH TWO POLE
	60-60 METER		SWITCH THREE POLE
	SERVICE ENTRANCE		

1 LEGEND AND SYMBOLS

SCALE: NTS



2 SERVICE ENTRANCE DETAILS

SCALE: NTS

2 MISCELLANEOUS DETAILS

SCALE: NTS



Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:	OWNER:	SUBMITTED BY:
PROPOSED REHABILITATION OF SAN BARTOLOME HIGH SCHOOL	GATE:	ENGR. LEO S. DEL ROSARIO
LOCATION:	CHECKED BY:	ENGR. ISABELA VERZOSA, JR.
BARANGAY SAN BARTOLOME, DISTRICT 5, QUEZON CITY	REVISION NO.:	

RECOMMENDING APPROVAL:	APPROVED BY:	SHEET CONTENT:	SHEET NO.
ENGR. ISABELA VERZOSA, JR.	HON. MA. JOSEFINA G. BELMONTE	GENERAL NOTES MISCELLANEOUS SERVICE ENTRANCE DETAILS	EL-02 1836

SERVICE ENTRANCE

UTILITY COMPANY
OVERHEAD LINE
230 VAC, 3 ϕ , 60HZ

M

USE : 2 - SETS OF
3-250mm² THHN 1 WIRE
1-50mm² TW WIRE GRND
IN 90mm² IMC PIPE

MOULDED CASE CIRCUIT BREAKER
800AT, 230V, 3 ϕ , 60HZ
WITH 1 - 150 AT, 3 ϕ , 230V
1 - 400 AT, 3 ϕ , 230V
1 - 600 AT, 3 ϕ , 230V
SERVICE PROTECTION IN "NEMA3R"
ENCLOSURE

USE : Y250

USE : 2 SETS OF Y150

3-250 MM² THW CU WIRE (AERIAL)

3-125 MM² THW CU WIRE (AERIAL)

X80

DP
(FOR REPLACEMENT)
SB 1 BUILDING
200 AT

Y150

DP
(FOR REPLACEMENT)
MATHAY BLDG.
225 AT

X125

DP
FACILITY
250 AT

Y80

DP
(FOR REPLACEMENT)
SB 2 BUILDING
150 AT

Y80

DP
HB BLDG
200 AT

2Y150

DP
NEW BUILDING
600 AT

CODE	DESCRIPTION	CODE	DESCRIPTION
2Y250	2 SETS OF 3-250MM ² THHN COPPER WIRE 1-50MM ² TW WIRE GRD 1-90MM ² IMC PIPE	Y150	3-150MM ² THHN COPPER WIRE 1-30MM ² TW WIRE GRD 1-90MM ² IMC PIPE
2Y125	2 SETS OF 3-125MM ² THHN COPPER WIRE 1-50MM ² TW WIRE GRD 1-90MM ² IMC PIPE	Y80	3-80MM ² THHN COPPER WIRE 1-23MM ² TW WIRE GRD 1-90MM ² IMC PIPE
Y250	3-250MM ² THHN COPPER WIRE 1-50MM ² TW WIRE GRD 1-90MM ² IMC PIPE	X80	3-80MM ² THHN COPPER WIRE 1-23MM ² TW WIRE GRD 1-90MM ² IMC PIPE
F250	3-250MM ² THW COPPER WIRE (AERIAL) 1-50MM ² TW COPPER WIRE	X100	3-100MM ² THHN COPPER WIRE 1-30MM ² TW WIRE GRD 1-90MM ² IMC PIPE
F125	3-125MM ² THW COPPER WIRE (AERIAL) 1-30MM ² TW COPPER WIRE	X125	3-125MM ² THHN COPPER WIRE 1-30MM ² TW WIRE GRD 1-90MM ² IMC PIPE
Y80	3-80MM ² THHN COPPER WIRE 1-23MM ² TW WIRE GRD 1-90MM ² IMC PIPE	PHASE ABC	A - RED NEUTRAL - BLACK B - YELLOW GROUND - WHITE C - BLUE
Y50	3-50MM ² THHN COPPER WIRE 1-15MM ² TW WIRE GRD 1-90MM ² IMC PIPE		

1 SINGLE LINE DIAGRAM

SCALE : NTS



Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE :
PROPOSED REHABILITATION OF SAN
BARTOLOME HIGH SCHOOL
LOCATION :
BARANGAY SAN BARTOLOME, DISTRICT 5, QUEZON CITY

DRAWN BY :
DATE :
CHECKED BY :
REVISIONS :

SUBMITTED BY :
ENGR. LEO S. DEL ROSARIO
HEAD, PLANNING & PROGRAMMING DIVISION

RECOMMENDING APPROVAL :
ENGR. ISAGANI R. VERZOSA, JR.
CITY ENGINEERING DEPARTMENT

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

SHEET CONTENT :
SINGLE LINE DIAGRAM
SHEET NO. :
EL-03
1936

MAIN CIRCUIT BREAKER

CCT NO.	LOAD DESCRIPTION	VOLTS	VA	AMPERE LOAD				AT	SIZE OF	
				AS	BC	CA	SD		WIRE	CONDUITS
1	FEEDER LINE 1	230	170,790	176.12	189.95	199.91		400	3-125.0mm ² THW COPPER WIRE 1-25.0mm ² TW GROUND WIRE	61 3/4" x 1.5" EMT
2	FEEDER LINE 2	230	146,355	157.39	173.83	181.94		400	3-125.0mm ² THW COPPER WIRE 1-25.0mm ² TW GROUND WIRE	61 3/4" x 1.5" EMT
3	WIRE	230	—	—	—	—		100	—	—
				362.51	363.78	381.85	381.94			

COMPUTATION:

$$IT = 1.732 \times [200.58 A] \times 0.25 \times 100$$

$$IT = 884.32 \text{ AMPERES}$$

OVER CURRENT PROTECTION:

USE: 800AT, 3P, 230V MOULDED CASE CIRCUIT BREAKER

MAIN FEEDER:

USE: 3 SETS OF 3-125.0mm² THW & 1-25.0mm² TW GROUND WIRE IN 61 3/4" x 1.5" EMT

FEEDER LINE 1

CCT NO.	LOAD DESCRIPTION	VOLTS	VA	AMPERE LOAD				AT	SIZE OF	
				AS	BC	CA	SD		WIRE	CONDUITS
1	3P 1 BULBING	230	40,216	176.12				200	2-50.0mm ² THW COPPER WIRE 1-25.0mm ² TW GROUND WIRE	1/2" 3/4" x 1.5" EMT
2	3P 1 BULBING	230	3,200			139.81		225	2-50.0mm ² THW COPPER WIRE 1-25.0mm ² TW GROUND WIRE	1/2" 3/4" x 1.5" EMT
3	WIRE	230	36,416	166.84				200	2-50.0mm ² THW COPPER WIRE 1-25.0mm ² TW GROUND WIRE	1/2" 3/4" x 1.5" EMT
				176.79	176.12	139.81	139.81			

COMPUTATION:

OVER CURRENT PROTECTION:

USE: 400AT, 3P, 230V MOULDED CASE CIRCUIT BREAKER

MAIN FEEDER:

USE: 3-250.0mm² THW & 1-25.0mm² TW GROUND WIRE IN 61 3/4" x 1.5" EMT

$$IT = 1.732 \times [176.12 A] \times 0.25 \times 100$$

$$IT = 768.38 \text{ AMPERES}$$

FEEDER LINE 2

CCT NO.	LOAD DESCRIPTION	VOLTS	VA	AMPERE LOAD				AT	SIZE OF	
				AS	BC	CA	SD		WIRE	CONDUITS
1	NON BULBING	230	16,440	71.19	62.28	71.19		300	2 SETS OF 2-150.0mm ² THW COPPER WIRE 1-50.0mm ² TW GROUND WIRE	1/2" 3/4" x 1.5" EMT
2	1P BULBING	230	520.19	71.19	62.28	71.19		200	2-50.0mm ² THW COPPER WIRE 1-25.0mm ² TW GROUND WIRE	1/2" 3/4" x 1.5" EMT
3	3P 2 BULBING	230	28,280	122.38	107.00	122.38		300	2-150.0mm ² THW COPPER WIRE 1-50.0mm ² TW GROUND WIRE	1/2" 3/4" x 1.5" EMT
				144.56	131.56	144.56	144.56			

COMPUTATION:

OVER CURRENT PROTECTION:

USE: 600AT, 3P, 230V MOULDED CASE CIRCUIT BREAKER

MAIN FEEDER:

USE: 3 SETS OF 3-150.0mm² THW & 1-50.0mm² TW GROUND WIRE IN 61 3/4" x 1.5" EMT

$$IT = 1.732 \times [200.58 A] \times 0.25 \times 100$$

$$IT = 400.00 \text{ AMPERES}$$

1 SCHEDULE OF LOADS

SCALE: NTS



Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:	DESIGNED BY:	SUBMITTED BY:	RECOMMENDING APPROVAL:	APPROVED BY:	SHEET CONTENT	SHEET NO.
PROPOSED REHABILITATION OF SAN BARTOLOME HIGH SCHOOL	DATE: 08/08/2024	ENGR. LEO S. DEL ROSARIO HEAD, PLANNING & PROGRAM DIVISION	ENGR. ISACAR R. VERZOSA, JR. SIC, CITY ENGINEERING DEPARTMENT	HON. MA. JOSEFINA G. BELMONTE CITY ENGINEER	SCHEDULE OF LOADS	EL-04 2036
LOCATION: BARANGAY SAN BARTOLOME, DISTRICT 3, QUEZON CITY	DESIGNED BY:					

FACILITY

EXISTING - MAIN DISTRIBUTION PANEL

CKT. NO.	LOAD DESCRIPTION	VOLTS	VA	AMP.	AT	SIZE OF	
						WIRES	CONDUITS
1	PT	120	28,440	128	100	2-800mm ² THHN COPPER WIRE 1-22.0mm ² TW GROUND WIRE	1/2 30mm ² PVC PIPE
2	LPP	230	8,340	36.50	30	2-35.0mm ² THHN COPPER WIRE 1-8.0mm ² TW GROUND WIRE	1/2 30mm ² PVC PIPE
			36,780	164.50			

COMPUTATION:

$$IT = \frac{28,440VA + 8,340VA}{230V}$$

$$IT = 168.95 \text{ AMPERES}$$
OVER CURRENT PROTECTION
 USE: 200AT, 2P, 230V MOLDED CASE CIRCUIT BREAKER IN NEMA 1
MAIN FEEDER:
 USE: 2 - 180.0mm² THHN & 1-36.0mm² TW GROUND WIRE IN 30mm² PVC PIPE/25mm² MC PIPE

SB 1 BUILDING

PROPOSED - MAIN DISTRIBUTION PANEL

CKT. NO.	LOAD DESCRIPTION	VOLTS	VA	AMP.	AT	SIZE OF	
						WIRES	CONDUITS
1	LPP GROUND FLOOR	230	12,840	55.80	70	2-14.0mm ² THHN COPPER WIRE 1-8.0mm ² TW GROUND WIRE	1/2 30mm ² MC PIPE
2	LPP SECOND FLOOR	230	12,840	55.75	70	2-14.0mm ² THHN COPPER WIRE 1-8.0mm ² TW GROUND WIRE	1/2 30mm ² MC PIPE
3	LPP THIRD FLOOR	230	5,380	23.38	30	2-14.0mm ² THHN COPPER WIRE 1-8.0mm ² TW GROUND WIRE	1/2 30mm ² MC PIPE
4	BOILER PLANT	230	5,240	22.78	30	2-14.0mm ² THHN COPPER WIRE 1-8.0mm ² TW GROUND WIRE	1/2 30mm ² MC PIPE
			40,240	175.13			

COMPUTATION:

$$IT = \frac{40,240VA + 0.0001VA}{230V}$$

$$IT = 175.13 \text{ AMPERES}$$
OVER CURRENT PROTECTION
 USE: 200AT, 2P, 230V MOLDED CASE CIRCUIT BREAKER IN NEMA 1
MAIN FEEDER:
 USE: 2 - 60.0mm² THHN & 1-20.0mm² TW GROUND WIRE IN 30mm² PVC PIPE/25mm² MC PIPE

SB 1 BUILDING

PROPOSED LPP - GROUND FLOOR

CKT. NO.	LOAD DESCRIPTION	VOLTS	VA	AMP.	AT	SIZE OF	
						WIRES	CONDUITS
1	12-LIGHTING FIXTURES	230	900	3.90	20	2-2.5mm ² THHN COPPER WIRE 1-2.5mm ² TW GROUND WIRE	1/2 30mm ² PVC PIPE
2	12-LIGHTING FIXTURES	230	900	3.90	20	2-2.5mm ² THHN COPPER WIRE 1-2.5mm ² TW GROUND WIRE	1/2 30mm ² PVC PIPE
3	8-COILING FANS	230	1,700	7.37	20	2-2.5mm ² THHN COPPER WIRE 1-2.5mm ² TW GROUND WIRE	1/2 30mm ² PVC PIPE
4	8-CONVENIENCE OUTLETS	230	1,440	6.26	20	2-2.5mm ² THHN COPPER WIRE 1-2.5mm ² TW GROUND WIRE	1/2 30mm ² PVC PIPE
5	8-CONVENIENCE OUTLETS	230	1,440	6.26	20	2-2.5mm ² THHN COPPER WIRE 1-2.5mm ² TW GROUND WIRE	1/2 30mm ² PVC PIPE
6	1-ACU	230	1,840	8	30	2-2.5mm ² THHN COPPER WIRE 1-2.5mm ² TW GROUND WIRE	1/2 30mm ² PVC PIPE
7	1-ACU	230	1,840	8	30	2-2.5mm ² THHN COPPER WIRE 1-2.5mm ² TW GROUND WIRE	1/2 30mm ² PVC PIPE
8	1-ACU	230	1,840	8	30	2-2.5mm ² THHN COPPER WIRE 1-2.5mm ² TW GROUND WIRE	1/2 30mm ² PVC PIPE
9	1-ACU	230	1,840	8	40	2-2.5mm ² THHN COPPER WIRE 1-2.5mm ² TW GROUND WIRE	1/2 30mm ² PVC PIPE
10	GRADE	230	—	—	20	—	—
			12,240	54.90			


COMPUTATION:

$$IT = \frac{12,240VA + (8.25 \times 1,840VA)}{230V}$$

$$IT = 59.36 \text{ AMPERES}$$
OVER CURRENT PROTECTION
 USE: 70AT, 2P, 230V MOLDED CASE CIRCUIT BREAKER IN NEMA 1
MAIN FEEDER:
 USE: 2 - 14.0mm² THHN & 1-8.0mm² TW GROUND WIRE IN 30mm² PVC PIPE/25mm² MC PIPE

1 SCHEDULE OF LOADS

SCALE: NTS

 <p>Republika ng Pilipinas Lungsod ng Quezon CITY ENGINEERING DEPARTMENT</p>	PROJECT TITLE:	DRAWN BY:	SUBMITTED BY:	RECOMMENDING APPROVAL:	APPROVED BY:	SHEET CONTENT	SHEET NO.
	PROPOSED REHABILITATION OF SAN BARTOLOME HIGH SCHOOL	DATE:	ENGR. LEO S. DEL ROSARIO HEAD, PLANNING AND DESIGN DIVISION	ENGR. ISAGANI R. VERZOSA, JR. SEC. CITY ENGINEERING DEPARTMENT	HON. MA. JOSEFINA G. BELMONTE CITY MAYOR	COVER SHEET OF LOADS	EL-05 2136
LOCATION: BARANGAY SAN BARTOLOME, DISTRICT 5, QUEZON CITY		DESIGNED BY:					

SB 1 BUILDING

PROPOSED LPP - SECOND FLOOR

CCT NO.	LOAD DESCRIPTION	VOLTS	VA	AMP.	AT	SIZE OF	
						WIRES	CONDUITS
1	10-LIGHTING FIXTURES	220	800	3.61	20	2-1.5mm ² THIN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	1/2 20mm ² PVC PIPE
2	10-LIGHTING FIXTURES	220	800	3.61	20	2-1.5mm ² THIN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	1/2 20mm ² PVC PIPE
3	8-CEILING FANS	220	1,200	5.22	30	2-1.5mm ² THIN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	1/2 20mm ² PVC PIPE
4	8-CONVENIENCE OUTLETS	220	1,440	6.28	20	2-1.5mm ² THIN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	1/2 20mm ² PVC PIPE
5	8-CONVENIENCE OUTLETS	220	1,440	6.28	30	2-1.5mm ² THIN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	1/2 20mm ² PVC PIPE
6	1-ACU	220	1,840	8	30	2-1.5mm ² THIN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	1/2 20mm ² PVC PIPE
7	1-ACU	220	1,840	8	30	2-1.5mm ² THIN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	1/2 20mm ² PVC PIPE
8	1-ACU	220	1,840	8	30	2-1.5mm ² THIN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	1/2 20mm ² PVC PIPE
9	1-ACU	220	1,840	8	40	2-1.5mm ² THIN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	1/2 20mm ² PVC PIPE
10	SPARE	220	—	—	30	—	—
		11,220	57.78				

COMPUTATION:

$$IT = \frac{11,220 \text{ VA} + (0.25 \times 1,840 \text{ VA})}{220 \text{ V}}$$

$$IT = 58.78 \text{ AMPERES}$$

OVER CURRENT PROTECTION

USE : 70AT, 2P, 230V MOLDED CASE CIRCUIT BREAKER IN NEMA 1

MAIN FEEDER:

USE : 2 - 14.0mm² THIN & 1-0.0mm² TW GROUND WIRE IN 32mm² PVC PIPE (25mm² PVC PIPE)

SB 1 BUILDING

PROPOSED LPP - THIRD FLOOR

CCT NO.	LOAD DESCRIPTION	VOLTS	VA	AMP.	AT	SIZE OF	
						WIRES	CONDUITS
1	8-LIGHTING FIXTURES	220	400	1.74	20	2-1.5mm ² THIN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	1/2 20mm ² PVC PIPE
2	8-LIGHTING FIXTURES	220	400	1.74	20	2-1.5mm ² THIN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	1/2 20mm ² PVC PIPE
3	10-LIGHTING FIXTURES	220	508	2.17	20	2-1.5mm ² THIN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	1/2 20mm ² PVC PIPE
4	4-CEILING FANS	220	600	2.61	20	2-1.5mm ² THIN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	1/2 20mm ² PVC PIPE
5	4-CEILING FANS	220	600	2.61	20	2-1.5mm ² THIN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	1/2 20mm ² PVC PIPE
6	4-CONVENIENCE OUTLETS	220	720	3.13	30	2-1.5mm ² THIN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	1/2 20mm ² PVC PIPE
7	4-CONVENIENCE OUTLETS	220	720	3.13	30	2-1.5mm ² THIN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	1/2 20mm ² PVC PIPE
8	4-CONVENIENCE OUTLETS	220	720	3.13	50	2-1.5mm ² THIN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	1/2 20mm ² PVC PIPE
9	4-CONVENIENCE OUTLETS	220	720	3.13	40	2-1.5mm ² THIN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	1/2 20mm ² PVC PIPE
10	SPARE	220	—	—	30	—	—
		5,280	23.39				

COMPUTATION:

$$IT = \frac{5,280 \text{ VA}}{220 \text{ V}}$$

$$IT = 23.39 \text{ AMPERES}$$

OVER CURRENT PROTECTION




USE : 70AT, 2P, 230V MOLDED CASE CIRCUIT BREAKER IN NEMA 1

MAIN FEEDER:

USE : 2 - 14.0mm² THIN & 1-0.0mm² TW GROUND WIRE IN 32mm² PVC PIPE (25mm² PVC PIPE)

1 SCHEDULE OF LOADS

SCALE : NTS

 <p>Republika ng Pilipinas Lungsod ng Quezon CITY ENGINEERING DEPARTMENT</p>	PROJECT TITLE:	DESIGNED BY:	SUBMITTED BY:	RECOMMENDING APPROVAL:	APPROVED BY:	SHEET CONTENT	SHEET NO.
	PROPOSED REHABILITATION OF SAN BARTOLOME HIGH SCHOOL	DATE:	 ENGR. LEO S. DEL ROSARIO <small>HEAD, PLANNING & PROGRAMS DIVISION</small>	 ENGR. ISAGANI R. VERZOSA, JR. <small>CITY ENGINEERING DEPARTMENT</small>	 HON. MA. JOSEFINA G. BELMONTE <small>DEPUTY</small>	 EL-06 2236	
	LOCATION:	DESIGNED BY:					DATE:
	BARANGAY SAN BARTOLOME, DISTRICT 5, QUEZON CITY	DESIGNED BY:					DATE:

MATHAY BUILDING**LPP A - EXISTING (THIRD FLOOR) - FOR REPLACEMENT**

CKT. NO.	LOAD DESCRIPTION	VOLTS	VA	AMP.	AT	SIZE OF	
						WIRES	CONDUITS
1	4-LIGHTING FIXTURES 2-CEILING FAN	220	500	2.27	20	2-3.0mm ² THHN COPPER WIRE 1-3.0mm ² TW GROUND WIRE	1/2" 20mm ² PVC PIPE
2	4-LIGHTING FIXTURES 2-CEILING FAN	220	500	2.27	20	2-3.0mm ² THHN COPPER WIRE 1-3.0mm ² TW GROUND WIRE	1/2" 20mm ² PVC PIPE
3	4-LIGHTING FIXTURES 2-CEILING FAN	220	500	2.27	20	2-3.0mm ² THHN COPPER WIRE 1-3.0mm ² TW GROUND WIRE	1/2" 20mm ² PVC PIPE
4	4-LIGHTING FIXTURES 2-CEILING FAN	220	500	2.27	20	2-3.0mm ² THHN COPPER WIRE 1-3.0mm ² TW GROUND WIRE	1/2" 20mm ² PVC PIPE
5	7-LIGHTING FIXTURES	220	350	1.52	20	2-3.0mm ² THHN COPPER WIRE 1-3.0mm ² TW GROUND WIRE	1/2" 20mm ² PVC PIPE
6	8-LIGHTING FIXTURES	220	300	1.30	20	2-3.0mm ² THHN COPPER WIRE 1-3.0mm ² TW GROUND WIRE	1/2" 20mm ² PVC PIPE
7	5-COMMENCEMENT OUTLETS	220	900	3.81	30	2-3.0mm ² THHN COPPER WIRE 1-3.0mm ² TW GROUND WIRE	1/2" 20mm ² PVC PIPE
8	4-COMMENCEMENT OUTLETS	220	720	3.12	20	2-3.0mm ² THHN COPPER WIRE 1-3.0mm ² TW GROUND WIRE	1/2" 20mm ² PVC PIPE
9	5-COMMENCEMENT OUTLETS	220	900	3.81	20	2-3.0mm ² THHN COPPER WIRE 1-3.0mm ² TW GROUND WIRE	1/2" 20mm ² PVC PIPE
10	4-COMMENCEMENT OUTLETS	220	720	3.12	20	2-3.0mm ² THHN COPPER WIRE 1-3.0mm ² TW GROUND WIRE	1/2" 20mm ² PVC PIPE
11	SPARE	220	—	—	30	—	—
12	SPARE	220	—	—	30	—	—
			5,280	13.91			

COMPUTATION :

$$IT = \frac{5,280 \text{ VA}}{220 \text{ V}}$$

$$IT = 23.91 \text{ AMPERES}$$

OVER CURRENT PROTECTION

USE : 100A, 2P, 230V MOLDED CASE CIRCUIT BREAKER IN NEMA 1

MAIN FEEDER :USE : 2 - 30.0mm² THHN & 1-8.0mm² TW GROUND WIRE IN 40mm² PVC PIPE/32mm² IMC PIPE**MATHAY BUILDING****LPP A - EXISTING (SECOND FLOOR) - FOR REPLACEMENT**

CKT. NO.	LOAD DESCRIPTION	VOLTS	VA	AMP.	AT	SIZE OF	
						WIRES	CONDUITS
1	4-LIGHTING FIXTURES 2-CEILING FAN	220	500	2.27	20	2-3.0mm ² THHN COPPER WIRE 1-3.0mm ² TW GROUND WIRE	1/2" PVC MOLDING
2	4-LIGHTING FIXTURES 2-CEILING FAN	220	500	2.27	20	2-3.0mm ² THHN COPPER WIRE 1-3.0mm ² TW GROUND WIRE	1/2" PVC MOLDING
3	4-LIGHTING FIXTURES 2-CEILING FAN	220	500	2.27	20	2-3.0mm ² THHN COPPER WIRE 1-3.0mm ² TW GROUND WIRE	1/2" PVC MOLDING
4	4-LIGHTING FIXTURES 2-CEILING FAN	220	500	2.27	20	2-3.0mm ² THHN COPPER WIRE 1-3.0mm ² TW GROUND WIRE	1/2" PVC MOLDING
5	7-LIGHTING FIXTURES	220	350	1.52	20	2-3.0mm ² THHN COPPER WIRE 1-3.0mm ² TW GROUND WIRE	1/2" PVC MOLDING
6	8-LIGHTING FIXTURES	220	300	1.30	20	2-3.0mm ² THHN COPPER WIRE 1-3.0mm ² TW GROUND WIRE	1/2" PVC MOLDING
7	5-COMMENCEMENT OUTLETS	220	1,020	4.59	20	2-3.0mm ² THHN COPPER WIRE 1-3.0mm ² TW GROUND WIRE	1/2" 20mm ² PVC PIPE
8	4-COMMENCEMENT OUTLETS	220	1,440	6.36	20	2-3.0mm ² THHN COPPER WIRE 1-3.0mm ² TW GROUND WIRE	1/2" 20mm ² PVC PIPE
9	5-COMMENCEMENT OUTLETS	220	1,020	4.59	20	2-3.0mm ² THHN COPPER WIRE 1-3.0mm ² TW GROUND WIRE	1/2" 20mm ² PVC PIPE
10	4-COMMENCEMENT OUTLETS	220	1,440	6.36	20	2-3.0mm ² THHN COPPER WIRE 1-3.0mm ² TW GROUND WIRE	1/2" 20mm ² PVC PIPE
11	SPARE	220	—	—	30	—	—
12	SPARE	220	—	—	30	—	—
			8,770	26.12			

COMPUTATION :

$$IT = \frac{8,770 \text{ VA}}{220 \text{ V}}$$


$$IT = 39.86 \text{ AMPERES}$$

OVER CURRENT PROTECTION

USE : 100A, 2P, 230V MOLDED CASE CIRCUIT BREAKER IN NEMA 1

MAIN FEEDER :USE : 2 - 30.0mm² THHN & 1-8.0mm² TW GROUND WIRE IN 40mm² PVC PIPE/32mm² IMC PIPE**1 SCHEDULE OF LOADS**

SCALE : NTS

 <p>Republika ng Pilipinas Lungsod ng Quezon CITY ENGINEERING DEPARTMENT</p>	PROJECT TITLE :	DRAWN BY :	SUBMITTED BY :	RECOMMENDING APPROVAL :	APPROVED BY :	SHEET CONTENT :	SHEET NO. :
	PROPOSED REHABILITATION OF SAN BARTOLOME HIGH SCHOOL	DATE :	ENGR. LEO S. DEL ROSARIO	ENGR. ISAGANI R. VERZOSA, JR.	HON. MA. JOSEFINA G. BELMONTE	SCHEDULE OF LOADS	EL-08 24/36
	LOCATION : BARANGAY SAN BARTOLOME, DISTRICT 5, QUEZON CITY	DESIGNED BY :	ENGR. LEO S. DEL ROSARIO	ENGR. ISAGANI R. VERZOSA, JR.	HON. MA. JOSEFINA G. BELMONTE		

MATHAY BUILDING

EXISTING - MAIN DISTRIBUTION PANEL

CKT. NO.	LOAD DESCRIPTION	VOLTS	VA	AMP.	AT	SIZE OF	
						WIRES	CONDUITS
1	1ST FLOOR FLOOR	230	15,508	67.13	100	2-35.0mm ² THHN COPPER WIRE 1-8.0mm ² TW GROUND WIRE	1/2 32mm ² MC PPE
2	1ST SECOND FLOOR	230	6,770	29.13	100	2-35.0mm ² THHN COPPER WIRE 1-8.0mm ² TW GROUND WIRE	1/2 32mm ² MC PPE
3	1ST THIRD FLOOR	230	5,880	25.51	100	2-35.0mm ² THHN COPPER WIRE 1-8.0mm ² TW GROUND WIRE	1/2 32mm ² MC PPE
4	STAGE	230	1,129	5.74	10	2-35.0mm ² THHN COPPER WIRE 1-8.0mm ² TW GROUND WIRE	1/2 32mm ² MC PPE
			31,887	138.51			

COMPUTATION :

$$IT = \frac{31,887 \text{ VA} \times (0.2913 \text{ A})}{230 \text{ V}}$$

$$IT = 140.61 \text{ AMPERES}$$

OVER CURRENT PROTECTION

USE : 225AT, 2P, 230V MOLDED CASE CIRCUIT BREAKER IN NEMA 1

MAIN FEEDER :

USE : 2 - 100.0mm² THHN & 1-30.0mm² TW GROUND WIRE IN 80mm² PVC PIPE/50mm² MC PIPE

STAGE

EXISTING - MAIN DISTRIBUTION PANEL

CKT. NO.	LOAD DESCRIPTION	VOLTS	VA	AMP.	AT	SIZE OF	
						WIRES	CONDUITS
1	12- LIGHTING FIXTURES	230	600	2.61	20	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	1/2 32mm ² PVC PIPE
2	4- CONVENIENCE OUTLETS	230	133	5.73	20	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	1/2 32mm ² PVC PIPE
			1,320	5.74			

COMPUTATION :

$$IT = \frac{1,320 \text{ VA}}{230 \text{ V}}$$

$$IT = 0.74 \text{ AMPERES}$$

OVER CURRENT PROTECTION

USE : 30AT, 2P, 230V MOLDED CASE CIRCUIT BREAKER IN NEMA 1

MAIN FEEDER :

USE : 2 - 3.5 mm² THHN & 1-3.5 mm² TW GROUND WIRE IN 25mm² PVC PIPE/20mm² MC PIPE

MATHAY BUILDING

LPP A - EXISTING (GROUND FLOOR) - FOR REPLACEMENT

CKT. NO.	LOAD DESCRIPTION	VOLTS	VA	AMP.	AT	SIZE OF	
						WIRES	CONDUITS
1	18- LIGHTING FIXTURES	230	600	2.61	20	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	1/2 32mm ² PVC PIPE
2	18- LIGHTING FIXTURES	230	600	2.61	20	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	1/2 32mm ² PVC PIPE
3	8- CONVENIENCE OUTLETS	230	1,448	6.29	20	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	1/2 32mm ² PVC PIPE
4	8- CONVENIENCE OUTLETS	230	1,448	6.29	20	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	1/2 32mm ² PVC PIPE
5	8- LIGHTING FIXTURES 4- OUTLET FAN	230	790	3.44	20	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	1/2 32mm ² PVC PIPE
6	8- LIGHTING FIXTURES	230	380	1.61	20	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	1/2 32mm ² PVC PIPE
7	8- CONVENIENCE OUTLETS	230	1,440	6.29	20	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	1/2 32mm ² PVC PIPE
8	8- CONVENIENCE OUTLETS	230	1,400	6.04	20	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	1/2 32mm ² PVC PIPE
9	1- ACU	230	1,840	8	20	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	1/2 32mm ² PVC PIPE
10	1- ACU	230	1,840	8	20	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	1/2 32mm ² PVC PIPE
11	1- ACU	230	1,840	8	20	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	1/2 32mm ² PVC PIPE
12	1- ACU	230	1,840	8	20	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	1/2 32mm ² PVC PIPE
			15,960	69.13			

COMPUTATION :

$$IT = \frac{15,960 \text{ VA} \times (0.2913 \text{ A})}{230 \text{ V}}$$

$$IT = 71.13 \text{ AMPERES}$$

OVER CURRENT PROTECTION


USE : 100AT, 2P, 230V MOLDED CASE CIRCUIT BREAKER IN NEMA 1

MAIN FEEDER :

USE : 2 - 30.0mm² THHN & 1-8.0mm² TW GROUND WIRE IN 40mm² PVC PIPE/32mm² MC PIPE

1 SCHEDULE OF LOADS

SCALE : NTS

 <p>Republika ng Pilipinas Lungsod ng Quezon CITY ENGINEERING DEPARTMENT</p>	PROJECT TITLE :	DRAWN BY :	SUBMITTED BY :	RECOMMENDING APPROVAL :	APPROVED BY :	SHEET CONTENT :	SHEET NO. :
	PROPOSED REHABILITATION OF SAN BARTOLOME HIGH SCHOOL	DATE :	ENGR. LEO S. DEL ROSARIO	ENGR. ISABANI R. VERZOSA, JR.	HON. MA. JOSEFINA G. BELMONTE	SCHEDULE OF LOADS	EL-07 23 36
LOCATION : BARANGAY SAN BARTOLOME, DISTRICT 5, QUEZON CITY		DESIGNED BY :	ENGR. LEO S. DEL ROSARIO	DR. OF ENGINEERING DEPARTMENT			

NEW BUILDING

EXISTING MAIN MAIN DISTRIBUTION PANEL

CCT. NO.	LOAD DESCRIPTION	VOLTS	VA	AMPERE LOAD				AT	SIZE OF	
				AS	BC	CA	SB		WIRE	CONDUIT
1	GROUND FLOOR	230	14,743	64.4	33.0	18.04		138	3-30mm ² THHN COPPER WIRE 1-60mm ² TW GROUND WIRE	40 30mm ² PVC PVE
2	SECOND FLOOR	230	14,743	64.4	33.0	18.04		138	3-30mm ² THHN COPPER WIRE 1-60mm ² TW GROUND WIRE	40 30mm ² PVC PVE
3	THIRD FLOOR	230	14,743	64.4	33.0	18.04		138	3-30mm ² THHN COPPER WIRE 1-60mm ² TW GROUND WIRE	40 30mm ² PVC PVE
4	FOURTH FLOOR	230	14,743	64.4	33.0	18.04		138	3-30mm ² THHN COPPER WIRE 1-60mm ² TW GROUND WIRE	40 30mm ² PVC PVE
5	SPACE	230	—	—	—	—	—	40	—	—
6	SPACE	230	—	—	—	—	—	40	—	—
			58,972	26.16	26.26	18.18				

COMPUTATION :

$$IT = 1.732 \times 58.972A$$

$$IT = 96.93 \text{ AMPERES}$$

OVER CURRENT PROTECTION

USE : 900AT, 3P, 230V MOLDED CASE CIRCUIT BREAKER

MAIN FEEDER :

USE : 3 - 118.5mm² THHN & 1-30.0mm² TW GROUND WIRE IN 40mm² PVC PVE

NEW BUILDING

LPP - EXISTING (GROUND FLOOR - FOURTH FLOOR TYPICAL)

CCT. NO.	LOAD DESCRIPTION	VOLTS	VA	AMPERE LOAD				AT	SIZE OF	
				AS	BC	CA	SB		WIRE	CONDUIT
1	5-LOTTING KITCHENS	230	400	1.74				38	3-30mm ² THHN COPPER WIRE 1-60mm ² TW GROUND WIRE	40 30mm ² PVC PVE
2	5-LOTTING KITCHENS	230	400	1.74				38	3-30mm ² THHN COPPER WIRE 1-60mm ² TW GROUND WIRE	40 30mm ² PVC PVE
3	5-LOTTING KITCHENS	230	400			1.74		38	3-30mm ² THHN COPPER WIRE 1-60mm ² TW GROUND WIRE	40 30mm ² PVC PVE
4	5-LOTTING KITCHENS	230	400			1.74		38	3-30mm ² THHN COPPER WIRE 1-60mm ² TW GROUND WIRE	40 30mm ² PVC PVE
5	5-LOTTING KITCHENS	230	400			1.74		38	3-30mm ² THHN COPPER WIRE 1-60mm ² TW GROUND WIRE	40 30mm ² PVC PVE
6	5-LOTTING KITCHENS	230	400			1.74		38	3-30mm ² THHN COPPER WIRE 1-60mm ² TW GROUND WIRE	40 30mm ² PVC PVE
7	5-LOTTING KITCHENS	230	380	1.67				38	3-30mm ² THHN COPPER WIRE 1-60mm ² TW GROUND WIRE	40 30mm ² PVC PVE
8	5-LOTTING KITCHENS	230	380	1.67				38	3-30mm ² THHN COPPER WIRE 1-60mm ² TW GROUND WIRE	40 30mm ² PVC PVE
9	5-LOTTING KITCHENS	230	380			1.67		38	3-30mm ² THHN COPPER WIRE 1-60mm ² TW GROUND WIRE	40 30mm ² PVC PVE
10	5-LOTTING KITCHENS	230	380			1.67		38	3-30mm ² THHN COPPER WIRE 1-60mm ² TW GROUND WIRE	40 30mm ² PVC PVE
11	5-LOTTING KITCHENS	230	360			1.61		38	3-30mm ² THHN COPPER WIRE 1-60mm ² TW GROUND WIRE	40 30mm ² PVC PVE
12	5-LOTTING KITCHENS	230	360			1.61		38	3-30mm ² THHN COPPER WIRE 1-60mm ² TW GROUND WIRE	40 30mm ² PVC PVE
13	5-LOTTING KITCHENS	230	1,140	8.39				38	3-30mm ² THHN COPPER WIRE 1-60mm ² TW GROUND WIRE	40 30mm ² PVC PVE
14	5-LOTTING KITCHENS	230	1,140	8.39				38	3-30mm ² THHN COPPER WIRE 1-60mm ² TW GROUND WIRE	40 30mm ² PVC PVE
15	5-LOTTING KITCHENS	230	1,140			8.39		38	3-30mm ² THHN COPPER WIRE 1-60mm ² TW GROUND WIRE	40 30mm ² PVC PVE
16	5-LOTTING KITCHENS	230	1,140			8.39		38	3-30mm ² THHN COPPER WIRE 1-60mm ² TW GROUND WIRE	40 30mm ² PVC PVE
17	5-LOTTING KITCHENS	230	1,140	8.39				38	3-30mm ² THHN COPPER WIRE 1-60mm ² TW GROUND WIRE	40 30mm ² PVC PVE
18	5-LOTTING KITCHENS	230	1,140	8.39				38	3-30mm ² THHN COPPER WIRE 1-60mm ² TW GROUND WIRE	40 30mm ² PVC PVE
19	SPACE	230	—	—	—	—	—	30	—	—
20	SPACE	230	—	—	—	—	—	30	—	—
			11,140	19.24	23.82	18.34				

COMPUTATION :

$$IT = 1.732 \times 25.812A$$

$$IT = 41.28 \text{ AMPERES}$$

OVER CURRENT PROTECTION


USE : 1800AT, 3P, 230V MOLDED CASE CIRCUIT BREAKER IN NEMA 1

MAIN FEEDER :

USE : 3 - 30.0mm² THHN & 1-30.0mm² TW GROUND WIRE IN 40mm² PVC PVE

1 SCHEDULE OF LOADS

SCALE : NTS

 <p>Republika ng Pilipinas Lungsod ng Quezon CITY ENGINEERING DEPARTMENT</p>	PROJECT TITLE :	DESIGNED BY :	SUBMITTED BY :	RECOMMENDING APPROVAL :	APPROVED BY :	SHEET CONTENT :	SHEET NO. :
	PROPOSED REHABILITATION OF SAN BARTOLOME HIGH SCHOOL	DATE :	ENGR. LEO S. DEL ROSARIO	ENGR. ISAGAN R. VERZOGA, JR.	HON. MA. JOSEFINA G. BELMONTE	SCHEDULE OF LOADS	EL-09
	LOCATION :	REVIEWED BY :	HEAD, PLANNING AND DESIGN DIVISION	HEAD, CITY ENGINEERING DEPARTMENT	CITY ENGINEER		25/36
	BARANGAY SAN BARTOLOME, DISTRICT 5, QUEZON CITY						

HB BUILDING

EXISTING MAIN MAIN DISTRIBUTION PANEL - FOR REPLACEMENT

CCT. NO.	LOAD DESCRIPTION	VOLTS	VA	AMPERE LOAD				AT	SIZE OF	
				AB	BC	CA	SB		WIRES	CONDUITS
1	GROUND FLOOR	230	12,175	51.02	14.16	14.16		100	3-35mm ² THW COPPER WIRE 1-50mm ² TW GROUND WIRE	3/4" SCHWAB PVC
2	SECOND FLOOR	230	12,175	51.02	14.16	14.16		100	3-35mm ² THW COPPER WIRE 1-50mm ² TW GROUND WIRE	3/4" SCHWAB PVC
3	THIRD FLOOR	230	12,175	51.02	14.16	14.16		100	3-35mm ² THW COPPER WIRE 1-50mm ² TW GROUND WIRE	3/4" SCHWAB PVC
4	FOURTH FLOOR	230	12,175	51.02	14.16	14.16		100	3-35mm ² THW COPPER WIRE 1-50mm ² TW GROUND WIRE	3/4" SCHWAB PVC
5	SPACE	230	---	---	---	---	---	30	---	---
6	CCTV	230	1,000	4.35				30	3-5.0mm ² THW COPPER WIRE 1-10mm ² TW GROUND WIRE	3/4" SCHWAB PVC
7	FMS	230	1,000			4.35		30	3-5.0mm ² THW COPPER WIRE 1-10mm ² TW GROUND WIRE	3/4" SCHWAB PVC
8	GENERATOR PANEL	230	3,140		1.3			30	3-5.0mm ² THW COPPER WIRE 1-10mm ² TW GROUND WIRE	3/4" SCHWAB PVC
			31,475	13.58	34.34	34.34				

COMPUTATION :

IT = 1750 X 0.184 A

IT = 319.7 AMPERES

OVER CURRENT PROTECTION

USE : 200AT, 3P, 230V MOULDED CASE CIRCUIT BREAKER

MAIN FEEDER :

USE : 3 - 60.0mm² THW & 1-22.0mm² TW GROUND WIRE IN 3/4" SCHWAB PVC

HB BUILDING

LPP - EXISTING (GROUND FLOOR) - FOR REPLACEMENT

CCT. NO.	LOAD DESCRIPTION	VOLTS	VA	AMPERE LOAD				AT	SIZE OF	
				AB	BC	CA	SB		WIRES	CONDUITS
1	8-LEADING PICTURES	230	1,200	5.20				30	3-2.5mm ² THW COPPER WIRE 1-10mm ² TW GROUND WIRE	3/4" SCHWAB PVC
2	4-LEADING PICTURES	230	1,200	5.20				30	3-2.5mm ² THW COPPER WIRE 1-10mm ² TW GROUND WIRE	3/4" SCHWAB PVC
3	12-LEADING PICTURES	230	600			5.20		30	3-2.5mm ² THW COPPER WIRE 1-10mm ² TW GROUND WIRE	3/4" SCHWAB PVC
4	1-LEADING PICTURES	230	600			5.20		30	3-2.5mm ² THW COPPER WIRE 1-10mm ² TW GROUND WIRE	3/4" SCHWAB PVC
5	4-LEADING PICTURES	230	1,200		4.20			30	3-2.5mm ² THW COPPER WIRE 1-10mm ² TW GROUND WIRE	3/4" SCHWAB PVC
6	4-LEADING PICTURES	230	1,200		4.20			30	3-2.5mm ² THW COPPER WIRE 1-10mm ² TW GROUND WIRE	3/4" SCHWAB PVC
7	4-LEADING PICTURES	230	1,200		4.20			30	3-2.5mm ² THW COPPER WIRE 1-10mm ² TW GROUND WIRE	3/4" SCHWAB PVC
8	4-LEADING PICTURES	230	1,200		4.20			30	3-2.5mm ² THW COPPER WIRE 1-10mm ² TW GROUND WIRE	3/4" SCHWAB PVC
9	4-LEADING PICTURES	230	1,200		4.20			30	3-2.5mm ² THW COPPER WIRE 1-10mm ² TW GROUND WIRE	3/4" SCHWAB PVC
10	4-LEADING PICTURES	230	1,200		4.20			30	3-2.5mm ² THW COPPER WIRE 1-10mm ² TW GROUND WIRE	3/4" SCHWAB PVC
11	4-LEADING PICTURES	230	1,200		4.20			30	3-2.5mm ² THW COPPER WIRE 1-10mm ² TW GROUND WIRE	3/4" SCHWAB PVC
12	4-LEADING PICTURES	230	1,200		4.20			30	3-2.5mm ² THW COPPER WIRE 1-10mm ² TW GROUND WIRE	3/4" SCHWAB PVC
13	4-LEADING PICTURES	230	1,200		4.20			30	3-2.5mm ² THW COPPER WIRE 1-10mm ² TW GROUND WIRE	3/4" SCHWAB PVC
14	4-LEADING PICTURES	230	1,200		4.20			30	3-2.5mm ² THW COPPER WIRE 1-10mm ² TW GROUND WIRE	3/4" SCHWAB PVC
15	4-LEADING PICTURES	230	1,200		4.20			30	3-2.5mm ² THW COPPER WIRE 1-10mm ² TW GROUND WIRE	3/4" SCHWAB PVC
16	4-LEADING PICTURES	230	1,200		4.20			30	3-2.5mm ² THW COPPER WIRE 1-10mm ² TW GROUND WIRE	3/4" SCHWAB PVC
17	SPACE	230	---	---	---	---	---	30	---	---
18	SPACE	230	---	---	---	---	---	30	---	---
			12,175	51.02	14.16	14.16				

COMPUTATION :

IT = 1750 X 0.184 A

IT = 319.7 AMPERES

OVER CURRENT PROTECTION


USE : 100AT, 3P, 230V MOULDED CASE CIRCUIT BREAKER IN NEMA 1

MAIN FEEDER :

USE : 3 - 60.0mm² THW & 1-22.0mm² TW GROUND WIRE IN 3/4" SCHWAB PVC

1 SCHEDULE OF LOADS

SCALE : NTS

 Republika ng Pilipinas Lungsod ng Quezon CITY ENGINEERING DEPARTMENT	PROJECT TITLE :	DRAWN BY :	SUBMITTED BY :	RECOMMENDING APPROVAL :	APPROVED BY :	SHEET CONTENT :	SHEET NO. :
	PROPOSED REHABILITATION OF SAN BARTOLOME HIGH SCHOOL	DATE :	ENGR. LEO S. DEL ROSARIO	ENGR. MAGNANO R. VERZOSA, JR.	HON. MA. JOSEFINA G. BELMONTE	SCHEDULE OF LOADS	EL-10 26/36
LOCATION :		CHECKED BY :	REVIEWED BY :				
BARANGAY SAN BARTOLOME, DISTRICT 5, QUEZON CITY							

HB BUILDING

LPP - EXISTING (SECOND FLOOR) - FOR REPLACEMENT

CCT. NO.	LOAD DESCRIPTION	VOLTS	VA	AMPERE LOAD				AT	SIZE OF	
				AB	BC	CA	SB		WIRES	CONDUITS
1	6-LIGHTING FIXTURES 4-CEILING FAN	220	1,000	4.55				30	2-12mm ² THHN COPPER WIRE 1-12mm ² TW GROUND WIRE	1/2" PVC BOLLING
2	6-LIGHTING FIXTURES 4-CEILING FAN	220	1,000	4.55				30	2-12mm ² THHN COPPER WIRE 1-12mm ² TW GROUND WIRE	1/2" PVC BOLLING
3	12-LIGHTING FIXTURES	220	600			0.81		30	2-12mm ² THHN COPPER WIRE 1-12mm ² TW GROUND WIRE	1/2" PVC BOLLING
4	6-LIGHTING FIXTURES	220	450			1.66		30	2-12mm ² THHN COPPER WIRE 1-12mm ² TW GROUND WIRE	1/2" PVC BOLLING
5	6-LIGHTING FIXTURES 4-CEILING FAN	220	1,000	4.55				30	2-12mm ² THHN COPPER WIRE 1-12mm ² TW GROUND WIRE	1/2" PVC BOLLING
6	6-LIGHTING FIXTURES 4-CEILING FAN	220	1,000	4.55				30	2-12mm ² THHN COPPER WIRE 1-12mm ² TW GROUND WIRE	1/2" PVC BOLLING
7	4-CONFORMANCE OUTLETS	220	720	3.27				30	2-12mm ² THHN COPPER WIRE 1-12mm ² TW GROUND WIRE	1/2" PVC BOLLING
8	4-CONFORMANCE OUTLETS	220	720	3.27				30	2-12mm ² THHN COPPER WIRE 1-12mm ² TW GROUND WIRE	1/2" PVC BOLLING
9	6-LIGHTING FIXTURES 2-CEILING FAN	220	900			3.24		30	2-12mm ² THHN COPPER WIRE 1-12mm ² TW GROUND WIRE	1/2" PVC BOLLING
10	6-LIGHTING FIXTURES 2-CEILING FAN	220	900			3.24		30	2-12mm ² THHN COPPER WIRE 1-12mm ² TW GROUND WIRE	1/2" PVC BOLLING
11	6-LIGHTING FIXTURES 2-CEILING FAN	220	900			4.44		30	2-12mm ² THHN COPPER WIRE 1-12mm ² TW GROUND WIRE	1/2" PVC BOLLING
12	6-LIGHTING FIXTURES 2-CEILING FAN	220	900			5.54		30	2-12mm ² THHN COPPER WIRE 1-12mm ² TW GROUND WIRE	1/2" PVC BOLLING
13	4-CONFORMANCE OUTLETS	220	720	3.27				30	2-12mm ² THHN COPPER WIRE 1-12mm ² TW GROUND WIRE	1/2" PVC BOLLING
14	4-CONFORMANCE OUTLETS	220	720	3.27				30	2-12mm ² THHN COPPER WIRE 1-12mm ² TW GROUND WIRE	1/2" PVC BOLLING
15	4-CONFORMANCE OUTLETS	220	720			3.33		30	2-12mm ² THHN COPPER WIRE 1-12mm ² TW GROUND WIRE	1/2" PVC BOLLING
16	4-CONFORMANCE OUTLETS	220	720			3.33		30	2-12mm ² THHN COPPER WIRE 1-12mm ² TW GROUND WIRE	1/2" PVC BOLLING
17	SWITCH	220	—	—	—	—	—	30	—	—
18	SWITCH	220	—	—	—	—	—	30	—	—
				13.77	21.22	14.78	10.81			

COMPUTATION :

$$IT = 1.75 \times 121.25W$$

$$IT = 36.75 \text{ AMPERES}$$

OVERCURRENT PROTECTION

USE : 100A, 3P, 220V MOLDED CASE CIRCUIT BREAKER IN NEMA 1

WIRE RECORD :

USE : 2-12mm² THHN & 14.8mm² TW GROUND WIRE IN 1/2" PVC BOLLING

HB BUILDING

LPP - EXISTING (THIRD FLOOR) - FOR REPLACEMENT

CCT. NO.	LOAD DESCRIPTION	VOLTS	VA	AMPERE LOAD				AT	SIZE OF	
				AB	BC	CA	SB		WIRES	CONDUITS
1	6-LIGHTING FIXTURES 4-CEILING FAN	220	1,200	5.45				30	2-12mm ² THHN COPPER WIRE 1-12mm ² TW GROUND WIRE	1/2" PVC BOLLING
2	6-LIGHTING FIXTURES 4-CEILING FAN	220	1,200	5.45				30	2-12mm ² THHN COPPER WIRE 1-12mm ² TW GROUND WIRE	1/2" PVC BOLLING
3	6-LIGHTING FIXTURES 4-CEILING FAN	220	1,200			4.44		30	2-12mm ² THHN COPPER WIRE 1-12mm ² TW GROUND WIRE	1/2" PVC BOLLING
4	6-LIGHTING FIXTURES 4-CEILING FAN	220	1,200			5.55		30	2-12mm ² THHN COPPER WIRE 1-12mm ² TW GROUND WIRE	1/2" PVC BOLLING
5	12-LIGHTING FIXTURES	220	600			3.33		30	2-12mm ² THHN COPPER WIRE 1-12mm ² TW GROUND WIRE	1/2" PVC BOLLING
6	6-CONFORMANCE OUTLETS	220	450			1.66		30	2-12mm ² THHN COPPER WIRE 1-12mm ² TW GROUND WIRE	1/2" PVC BOLLING
7	4-CONFORMANCE OUTLETS	220	720	3.27				30	2-12mm ² THHN COPPER WIRE 1-12mm ² TW GROUND WIRE	1/2" PVC BOLLING
8	4-CONFORMANCE OUTLETS	220	720	3.27				30	2-12mm ² THHN COPPER WIRE 1-12mm ² TW GROUND WIRE	1/2" PVC BOLLING
9	4-CONFORMANCE OUTLETS	220	720			3.33		30	2-12mm ² THHN COPPER WIRE 1-12mm ² TW GROUND WIRE	1/2" PVC BOLLING
10	4-CONFORMANCE OUTLETS	220	720			3.33		30	2-12mm ² THHN COPPER WIRE 1-12mm ² TW GROUND WIRE	1/2" PVC BOLLING
11	SWITCH	220	1,200	5.45				30	2-12mm ² THHN COPPER WIRE 1-12mm ² TW GROUND WIRE	1/2" PVC BOLLING
12	SWITCH	220	1,200	5.45				30	2-12mm ² THHN COPPER WIRE 1-12mm ² TW GROUND WIRE	1/2" PVC BOLLING
13	SWITCH	220	—	—	—	—	—	30	—	—
14	SWITCH	220	—	—	—	—	—	30	—	—
				15.08	14.86	17.81	14.86			

COMPUTATION :

$$IT = 1.75 \times 171.15W$$

$$IT = 30.05 \text{ AMPERES}$$

OVER CURRENT PROTECTION

USE : 100A, 3P, 220V MOLDED CASE CIRCUIT BREAKER IN NEMA 1

WIRE RECORD :

USE : 2-12mm² THHN & 14.8mm² TW GROUND WIRE IN 1/2" PVC BOLLING

1 SCHEDULE OF LOADS

SCALE : NTS



Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:	DRAWN BY:	SUBMITTED BY:
PROPOSED REHABILITATION OF SAN BARTOLOME HIGH SCHOOL	CHECKED BY:	ENGR. LEO S. DEL ROSARIO
LOCATION:	DESIGNED BY:	ENGR. ISABON R. VERZOSA, JR.
BARANGAY SAN BARTOLOME, DISTRICT 5, QUEZON CITY	DESIGNED BY:	HON. MA. JOSEFINA G. BELMONTE

RECOMMENDING APPROVAL:	APPROVED BY:
ENGR. LEO S. DEL ROSARIO	HON. MA. JOSEFINA G. BELMONTE
HEAD, PLANNING & CONSTRUCTION DIVISION	CITY ENGINEER

SHEET CONTENT:	SHEET NO.
SCHEDULE OF LOADS	EL-11 2736

HB BUILDING

LPP - EXISTING (FOURTH FLOOR) - FOR REPLACEMENT

CIT. NO.	LOAD DESCRIPTION	VOLTS	VA	AMPERE LOAD				AT	SIZE OF	
				AB	BC	CA	SB		WIRES	CONDUITS
1	3-GRADING FIXTURES 1-GRADING FIX	270	1,000	4.30				30	2-12mm ² THHN COPPER WIRE 1-12mm ² TW GROUND WIRE	1x 25mm ² MC PIPE
2	3-GRADING FIXTURES 1-GRADING FIX	270	1,000	4.30				30	2-12mm ² THHN COPPER WIRE 1-12mm ² TW GROUND WIRE	1x 25mm ² MC PIPE
3	3-GRADING FIXTURES 1-GRADING FIX	270	1,000			4.30		30	2-12mm ² THHN COPPER WIRE 1-12mm ² TW GROUND WIRE	1x 25mm ² MC PIPE
4	3-GRADING FIXTURES 1-GRADING FIX	270	1,000			4.30		30	2-12mm ² THHN COPPER WIRE 1-12mm ² TW GROUND WIRE	1x 25mm ² MC PIPE
5	3-GRADING FIXTURES 1-GRADING FIX	270	1,000			4.30		30	2-12mm ² THHN COPPER WIRE 1-12mm ² TW GROUND WIRE	1x 25mm ² MC PIPE
6	3-GRADING FIXTURES 1-GRADING FIX	270	1,000			4.30		30	2-12mm ² THHN COPPER WIRE 1-12mm ² TW GROUND WIRE	1x 25mm ² MC PIPE
7	1-COMMERCIAL OUTLET	270	700	3.13				30	2-12mm ² THHN COPPER WIRE 1-12mm ² TW GROUND WIRE	1x 25mm ² MC PIPE
8	1-COMMERCIAL OUTLET	270	700	3.13				30	2-12mm ² THHN COPPER WIRE 1-12mm ² TW GROUND WIRE	1x 25mm ² MC PIPE
9	1-COMMERCIAL OUTLET	270	700	3.13				30	2-12mm ² THHN COPPER WIRE 1-12mm ² TW GROUND WIRE	1x 25mm ² MC PIPE
10	1-COMMERCIAL OUTLET	270	700	3.13				30	2-12mm ² THHN COPPER WIRE 1-12mm ² TW GROUND WIRE	1x 25mm ² MC PIPE
11	OTHER LOADS	270	1,000	4.30				30	2-12mm ² THHN COPPER WIRE 1-12mm ² TW GROUND WIRE	1x 25mm ² MC PIPE
12	OTHER LOADS	270	1,000	4.30				30	2-12mm ² THHN COPPER WIRE 1-12mm ² TW GROUND WIRE	1x 25mm ² MC PIPE
13	SPACE	270	—	—				30	—	—
14	SPACE	270	—	—				30	—	—
				10.00	14.30	10.13	11.00			

COMPUTATION:

$$IT = 1.73 \times 17.17 \text{ KA}$$

$$IT = 29.4 \text{ AMPERES}$$

OVER CURRENT PROTECTION

USE: 150AT, 3P, 250V MOULDED CASE CIRCUIT BREAKER IN NEMA 1

MAIN FEEDER:

USE: 3-35mm² THHN & 1-14mm² TW GROUND WIRE IN 50mm² MC PIPE

COVERED COURT

EXISTING - MAIN DISTRIBUTION PANEL

CIT. NO.	LOAD DESCRIPTION	VOLTS	VA	AMPERE LOAD				AT	SIZE OF	
				AB	BC	CA	SB		WIRES	CONDUITS
1	3-GRADING FIXTURES 1-GRADING FIX	270	1,000	4.30				30	2-12mm ² THHN COPPER WIRE 1-12mm ² TW GROUND WIRE	1x 25mm ² MC PIPE
2	3-GRADING FIXTURES 1-GRADING FIX	270	1,000	4.30				30	2-12mm ² THHN COPPER WIRE 1-12mm ² TW GROUND WIRE	1x 25mm ² MC PIPE
3	3-GRADING FIXTURES 1-GRADING FIX	270	1,000	4.30				30	2-12mm ² THHN COPPER WIRE 1-12mm ² TW GROUND WIRE	1x 25mm ² MC PIPE
4	1-COMMERCIAL OUTLET	270	700	3.13				30	2-12mm ² THHN COPPER WIRE 1-12mm ² TW GROUND WIRE	1x 25mm ² MC PIPE
5	1-COMMERCIAL OUTLET	270	700	3.13				30	2-12mm ² THHN COPPER WIRE 1-12mm ² TW GROUND WIRE	1x 25mm ² MC PIPE
6	OTHER LOADS	270	1,000	4.30				30	2-12mm ² THHN COPPER WIRE 1-12mm ² TW GROUND WIRE	1x 25mm ² MC PIPE
				10.00	14.30	10.13	11.00			

COMPUTATION:

OVER CURRENT PROTECTION

USE: 40AT, 2P, 250V MOULDED CASE CIRCUIT BREAKER IN NEMA 1

MAIN FEEDER:

USE: 2-55mm² THHN & 1-14mm² TW GROUND WIRE IN 50mm² MC PIPE

$$IT = 0.866 \times 17.17 \text{ KA}$$

$$IT = 14.9 \text{ AMPERES}$$

SB 2 BUILDING

EXISTING - MAIN DISTRIBUTION PANEL

CIT. NO.	LOAD DESCRIPTION	VOLTS	VA	AMPERE LOAD				AT	SIZE OF	
				AB	BC	CA	SB		WIRES	CONDUITS
1	1PP SECOND FLOOR	270	12,400	45.21				100	2-35mm ² THHN COPPER WIRE 1-14mm ² TW GROUND WIRE	1x 50mm ² MC PIPE
2	1PP SECOND FLOOR	270	8,400	30.74				100	2-35mm ² THHN COPPER WIRE 1-14mm ² TW GROUND WIRE	1x 50mm ² MC PIPE
3	1PP THIRD FLOOR	270	8,400	30.74				100	2-35mm ² THHN COPPER WIRE 1-14mm ² TW GROUND WIRE	1x 50mm ² MC PIPE
4	1PP FOURTH FLOOR	270	8,400	30.74				100	2-35mm ² THHN COPPER WIRE 1-14mm ² TW GROUND WIRE	1x 50mm ² MC PIPE
				112.00	116.45	116.45	116.45			

COMPUTATION:

$$IT = 1.73 \times 116.45 \times 1.73 \text{ KA}$$

$$IT = 337 \text{ AMPERES}$$

OVER CURRENT PROTECTION

USE: 400AT, 3P, 250V MOULDED CASE CIRCUIT BREAKER IN NEMA 1

MAIN FEEDER:

USE: 3-35mm² THHN & 1-14mm² TW GROUND WIRE IN 50mm² MC PIPE

SB 2 BUILDING

PROPOSED MAIN DISTRIBUTION PANEL

CIT. NO.	LOAD DESCRIPTION	VOLTS	VA	AMPERE LOAD				AT	SIZE OF	
				AB	BC	CA	SB		WIRES	CONDUITS
1	1PP SECOND FLOOR	270	12,400	45.21				100	2-14mm ² THHN COPPER WIRE 1-55mm ² TW GROUND WIRE	1x 50mm ² MC PIPE
2	1PP SECOND FLOOR	270	12,400	45.21				100	2-14mm ² THHN COPPER WIRE 1-55mm ² TW GROUND WIRE	1x 50mm ² MC PIPE
3	1PP THIRD FLOOR	270	12,400	45.21				100	2-14mm ² THHN COPPER WIRE 1-55mm ² TW GROUND WIRE	1x 50mm ² MC PIPE
4	1PP FOURTH FLOOR	270	12,400	45.21				100	2-14mm ² THHN COPPER WIRE 1-55mm ² TW GROUND WIRE	1x 50mm ² MC PIPE
5	COVERED COURT	270	1,000	4.30				30	2-12mm ² THHN COPPER WIRE 1-12mm ² TW GROUND WIRE	1x 25mm ² MC PIPE
6	SPACE	270	—	—				30	—	—
				112.00	116.45	116.45	116.45			

COMPUTATION:

$$IT = 1.73 \times 116.45 \times 1.73 \text{ KA}$$

$$IT = 337 \text{ AMPERES}$$

OVER CURRENT PROTECTION

USE: 150AT, 3P, 250V MOULDED CASE CIRCUIT BREAKER

MAIN FEEDER:

USE: 3-50mm² THHN & 1-14mm² TW GROUND WIRE IN 50mm² MC PIPE

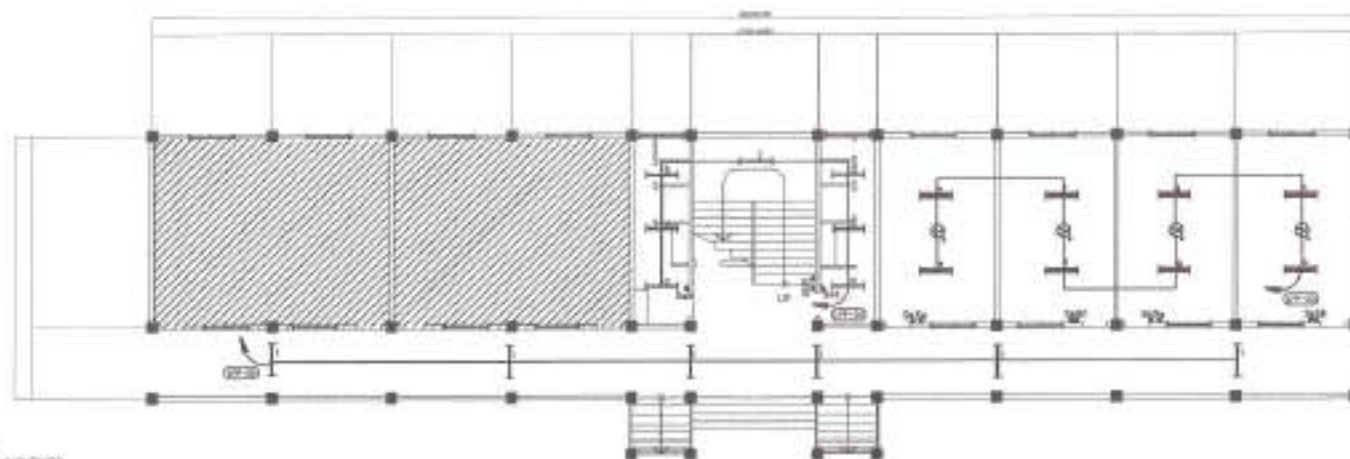
1 SCHEDULE OF LOADS

SCALE: NTS

PROJECT TITLE:	DESIGNED BY:	SUBMITTED BY:	RECOMMENDING APPROVAL:	APPROVED BY:	SHEET CONTENT	SHEET NO.
PROPOSED REHABILITATION OF SAN BARTOLOME HIGH SCHOOL	ENGR. LEO S. DEL ROSARIO	ENGR. LEO S. DEL ROSARIO	ENGR. LEO S. DEL ROSARIO	HON. MA. JOSEFINA G. BELMONTE	SCHEDULE OF LOADS	EL-12 28/36
LOCATION: BARANGAY SAN BARTOLOME, DISTRICT 5, QUEZON CITY	DATE: 10/10/2014	DESIGNED BY: 10/10/2014	RECOMMENDING APPROVAL: 10/10/2014	APPROVED BY: 10/10/2014		



Republic of the Philippines
Luzon, Quezon City
CITY ENGINEERING DEPARTMENT

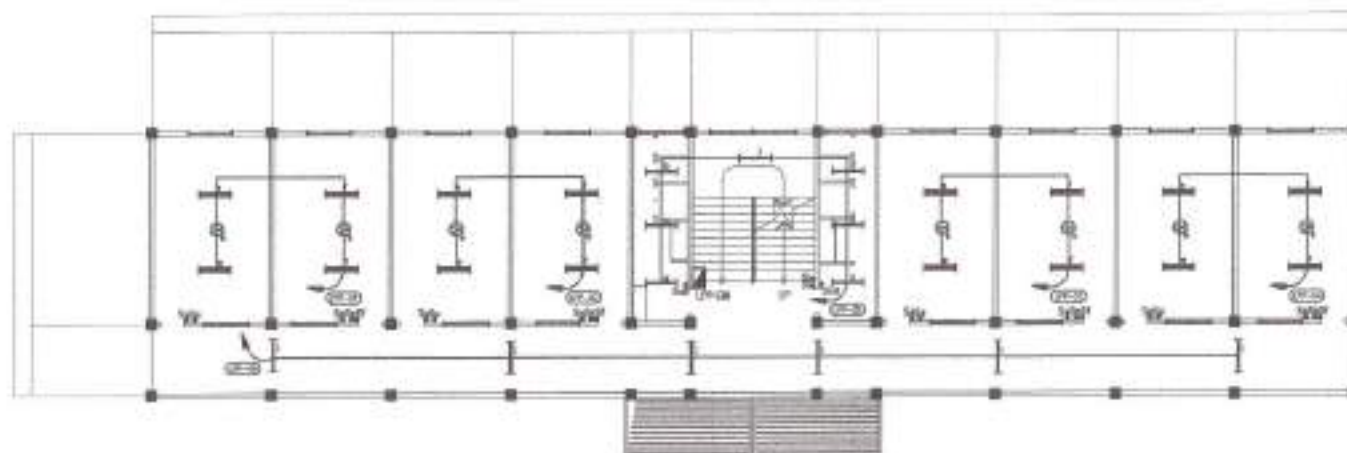


NOTE:

1. REPLACEMENT OF LIGHTING FIXTURES
2. REPLACEMENT OF SWITCHES AND CEILING FANS
3. REWIRING

GROUND FLOOR LIGHTING LAYOUT (MATHAY BUILDING)

SCALE : 1:200 M



NOTE:

1. REPLACEMENT OF LIGHTING FIXTURES
2. REPLACEMENT OF SWITCHES AND CEILING FANS
3. REWIRING

SECOND FLOOR LIGHTING LAYOUT (MATHAY BUILDING)

SCALE : 1:125 M



Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE :

PROPOSED REHABILITATION OF SAN
BARTOLOME HIGH SCHOOL

LOCATION:

BARANGAY SAN BARTOLOME, DISTRICT 5, QUEZON CITY

DRAWN BY:

DATE:

CHECKED BY:

DESIGNED BY:

SUBMITTED BY:

ENGR. LEO S. DEL ROSARIO
HEAD, PLANNING & PROGRAMS DIVISION

RECOMMENDING APPROVAL:

ENGR. BAGANI R. VERZOSA, JR.
SEC. CITY ENGINEERING DEPARTMENT

APPROVED BY:

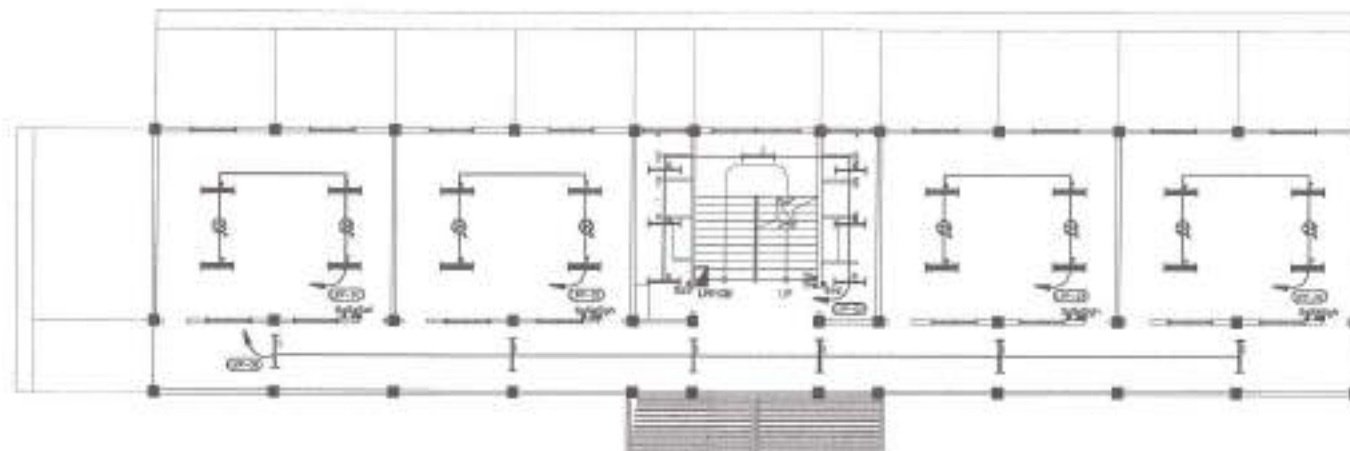
HON. MA. JOSEFINA G. BELMONTE
CITY ENGINEER

SHEET CONTENT

GROUND FLOOR
LIGHTING LAYOUT
(MATHAY BUILDING)
SECOND FLOOR
LIGHTING LAYOUT
(MATHAY BUILDING)

SHEET NO.

EL-14
30/36

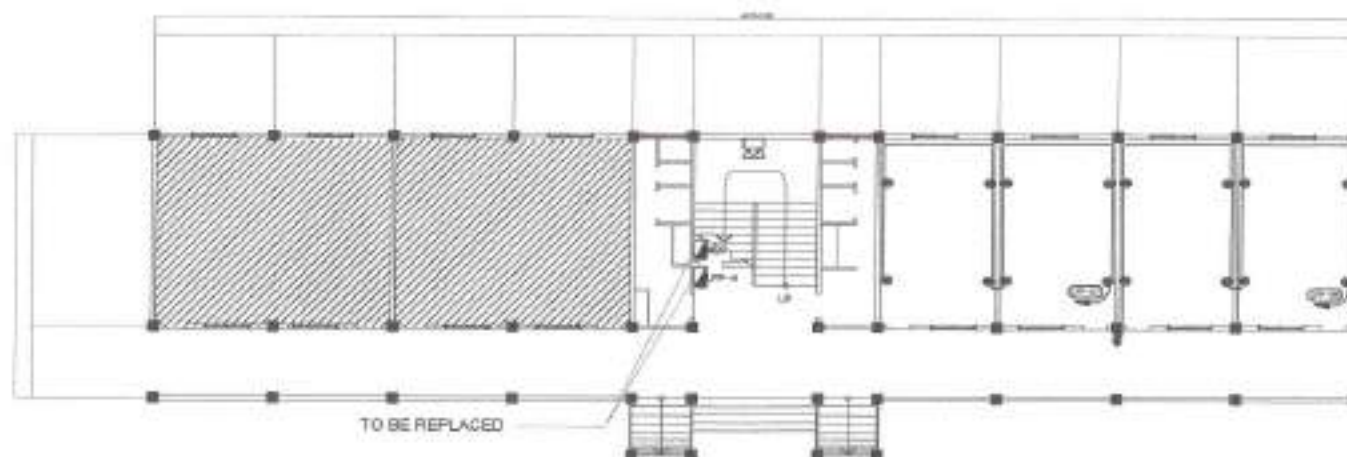


NOTE:

1. REPLACEMENT OF LIGHTING FIXTURES
2. REPLACEMENT OF SWITCHES AND CEILING FANS
3. REWIRING

1 THIRD FLOOR LIGHTING LAYOUT (MATHAY BUILDING)

SCALE : 1:200 M



NOTE:

1. REPLACEMENT OF OUTLETS
2. REWIRING

2 GROUND FLOOR POWER LAYOUT (MATHAY BUILDING)

SCALE : 1:125 M



Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:

PROPOSED REHABILITATION OF SAN
BARTOLOME HIGH SCHOOL

LOCATION:
BARANGAY SAN BARTOLOME, DISTRICT 6, QUEZON CITY

DRAWN BY:

DATE:

CHECKED BY:

REVIEWED BY:

SUBMITTED BY:

ENGR. LEO S. DEL ROSARIO
HEAD, PLANNING PROGRAMS DIVISION

RECOMMENDING APPROVAL:

ENGR. ISAGANI R. VERZOSA, JR.
SEC. CITY ENGINEERING DEPARTMENT

APPROVED BY:

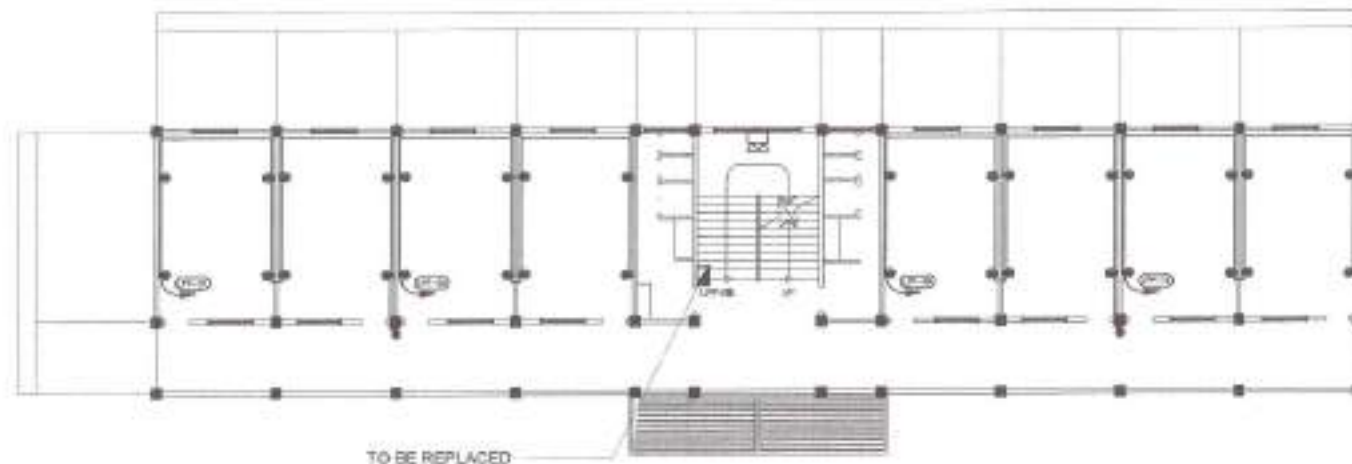
HON. MA. JOSEFINA G. BELMONTE
CITY ALCALDE

SHEET CONTENT

THIRD FLOOR
LIGHTING LAYOUT
(MATHAY BUILDING)
GROUND FLOOR
POWER LAYOUT
(MATHAY BUILDING)

SHEET NO.

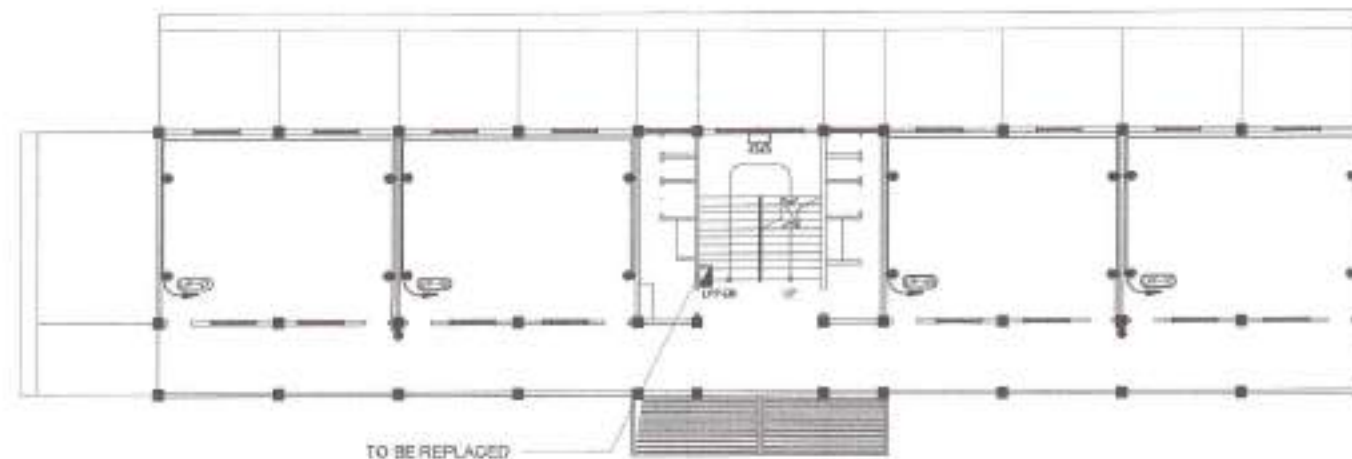
EL-15
31/36



NOTE:
1. REPLACEMENT OF OUTLETS
2. REWIRING

1 SECOND FLOOR POWERLAYOUT (MATHAY BUILDING)

SCALE : 1:200 M



NOTE:
1. REPLACEMENT OF OUTLETS
2. REWIRING

2 THIRD FLOOR POWER LAYOUT (MATHAY BUILDING)

SCALE : 1:200 M



Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE :

PROPOSED REHABILITATION OF SAN
BARTOLOME HIGH SCHOOL

LOCATION :

BARANGAY SAN BARTOLOME, DISTRICT 5, QUEZON CITY

DRAWN BY :

DATE :

CHECKED BY :

REVISION NO. :

SUBMITTED BY :

ENGR. LEO S. DEL ROSARIO
HEAD, PLUMBING & ELECTRICAL DIVISION

RECOMMENDING APPROVAL :

ENGR. ISAGANI R. VERZOSA, JR.
OC, CITY ENGINEERING DEPARTMENT

APPROVED BY :

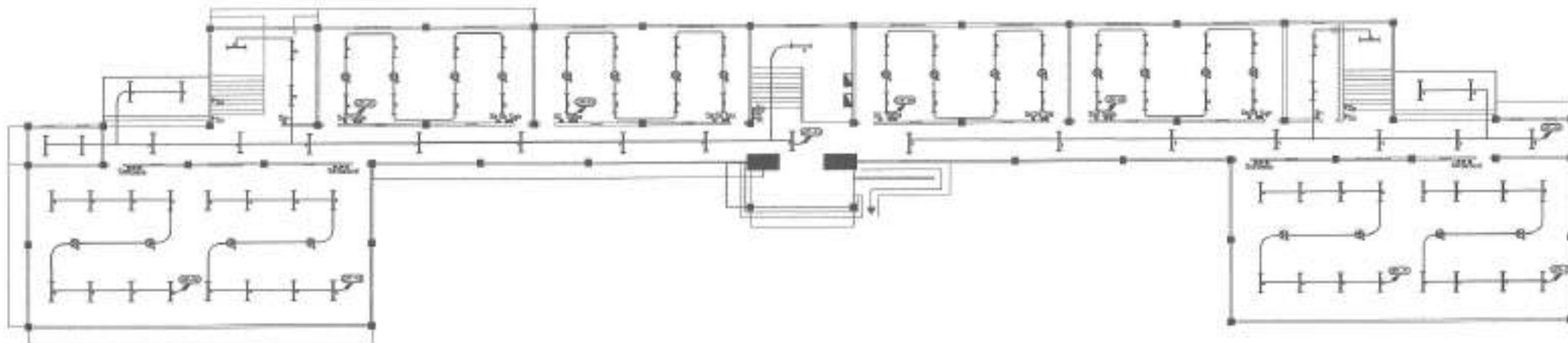
HON. MA. JOSEFINA G. BELMONTE
CITY ENGINEER

SHEET CONTENT

SECOND FLOOR
POWER LAYOUT
(MATHAY BUILDING)
THIRD FLOOR POWER
LAYOUT (MATHAY BUILDING)

SHEET NO.

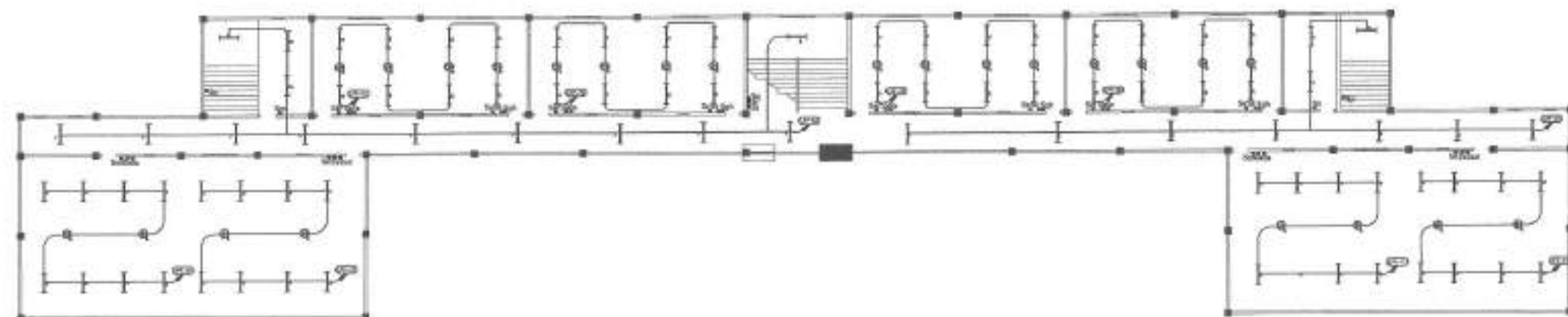
EL-16
3236



- NOTE:
1. REPLACEMENT OF LIGHTING FIXTURE, SWITCHES AND CEILING FANS
 2. REWIRING

1 GROUND FLOOR LIGHTING LAYOUT (HB BUILDING)


SCALE : 1:250 M

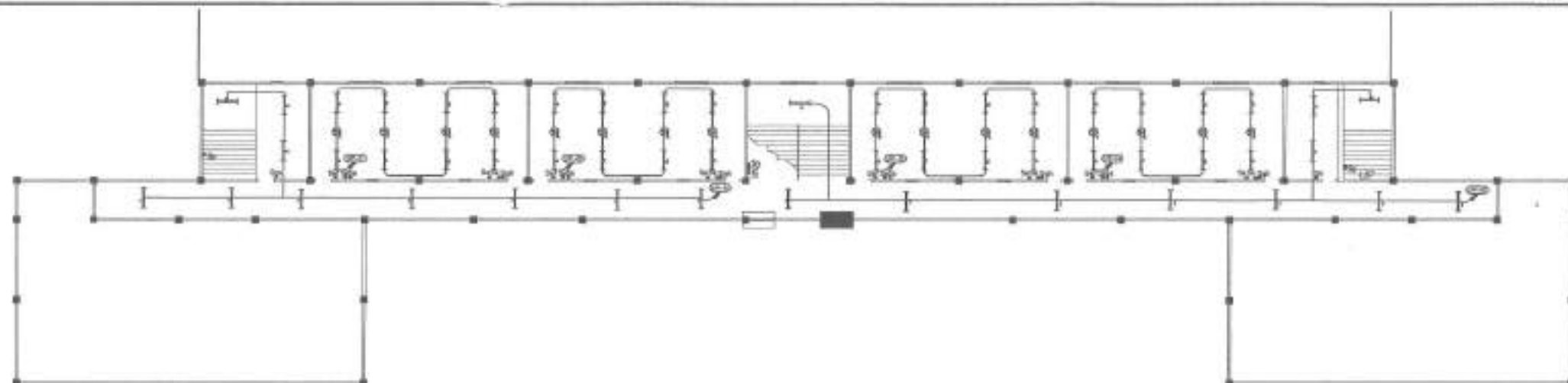


- NOTE:
1. REPLACEMENT OF LIGHTING FIXTURE, SWITCHES AND CEILING FANS
 2. REWIRING

2 SECOND FLOOR LIGHTING LAYOUT (HB BUILDING)

SCALE : 1:250 M

 <p>Republika ng Pilipinas Lungsod ng Quezon CITY ENGINEERING DEPARTMENT</p>	PROJECT TITLE:	DRAWN BY:	SUBMITTED BY:	RECOMMENDING APPROVAL:	APPROVED BY:	SHEET CONTENT	SHEET NO.
	PROPOSED REHABILITATION OF SAN BARTOLOME HIGH SCHOOL	DATE: 08/01/2024 DESIGNED BY: [Signature] REVIEWER NO.:	ENGR. LEO S. DEL ROSARIO HEAD, PLUMBING & ELECTRICAL DIVISION	ENGR. ISAGANI R. VERZOSA, JR. SEC. CITY ENGINEERING DEPARTMENT	HON. MA. JOSEFINA G. BELMONTE CITY MAYOR	GROUND FLOOR LIGHTING LAYOUT (HB BUILDING) SECOND FLOOR LIGHTING LAYOUT (HB BUILDING)	EL-17 33/36

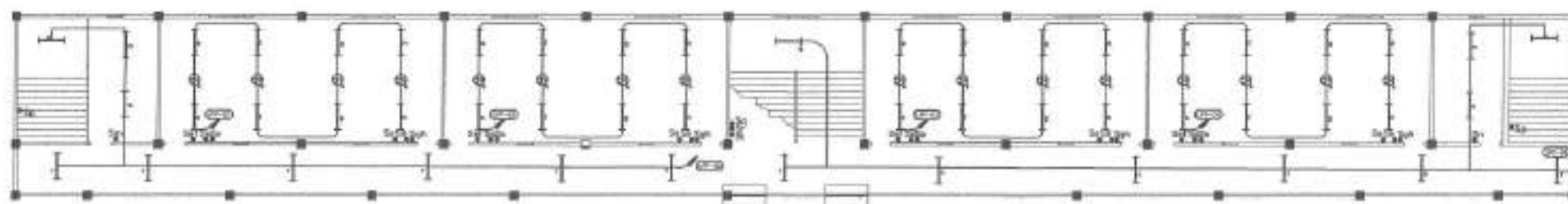


NOTE:

1. REPLACEMENT OF LIGHTING FIXTURE, SWITCHES AND CEILING FANS
2. REWIRING

1 THIRD FLOOR LIGHTING LAYOUT (HB BUILDING)

SCALE : 1:250 M



NOTE:

1. REPLACEMENT OF LIGHTING FIXTURE, SWITCHES AND CEILING FANS
2. REWIRING

2 FOURTH FLOOR LIGHTING LAYOUT (HB BUILDING)

SCALE : 1:200 M



Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:

**PROPOSED REHABILITATION OF SAN
BARTOLOME HIGH SCHOOL**

LOCATION:

BARANGAY SAN BARTOLOME, DISTRICT 1, QUEZON CITY

DRAWN BY:

DATE:

DESIGNED BY:

REVISION NO.:

SUBMITTED BY:

ENGR. LEO S. DEL ROSARIO
HEAD, PLANNING & PROGRAM COORDINATOR

RECOMMENDING APPROVAL:

ENGR. ISAGANI R. VERZOSA, JR.
DEPUTY CITY ENGINEERING SUPERVISOR

APPROVED BY:

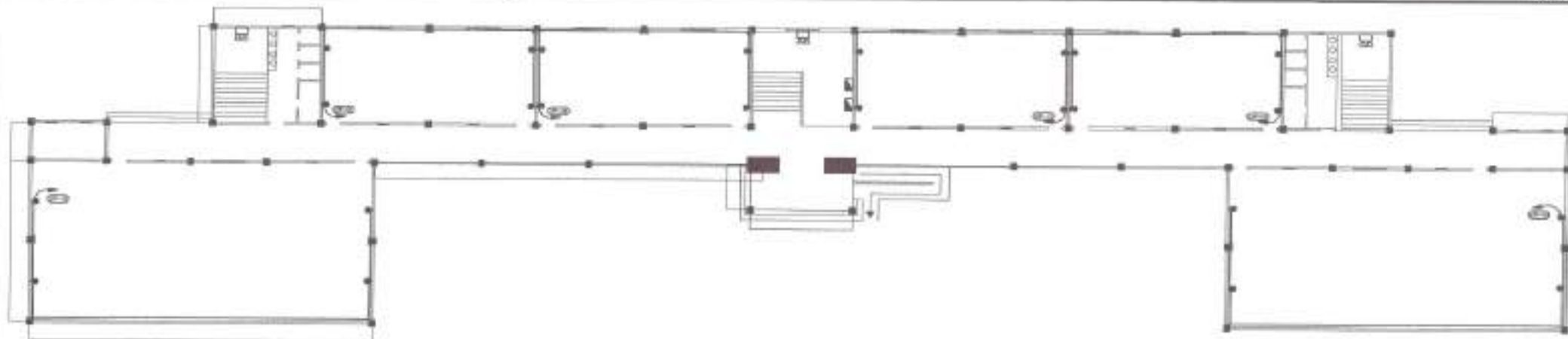
HON. MA. JOSEFINA G. BELMONTE
CITY MAYOR

SHEET CONTENT

THIRD FLOOR LIGHTING
LAYOUT (HB BUILDING)
FOURTH
FLOOR LIGHTING
LAYOUT (HB BUILDING)

SHEET NO.

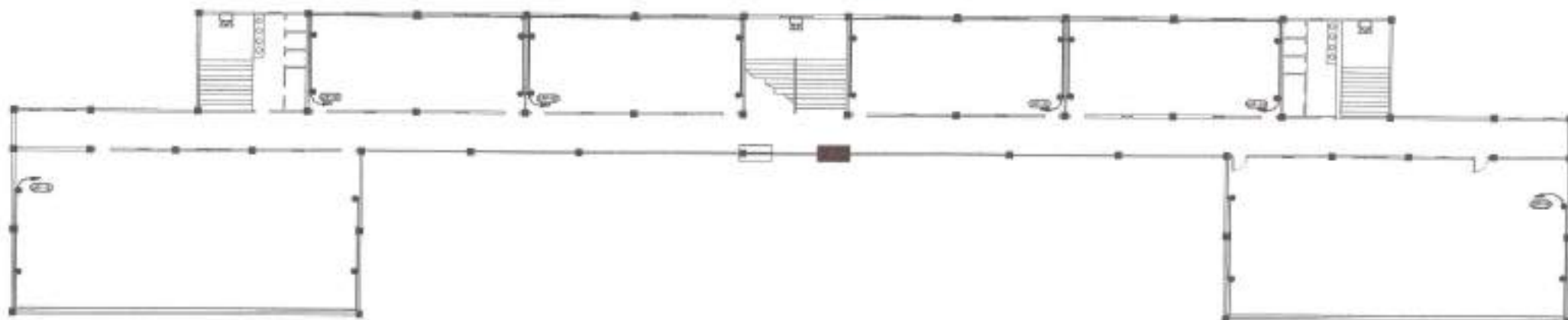
EL-18
34/36



NOTE:
1. REPLACEMENT OF OUTLETS
2. REWIRING

1 GROUND FLOOR POWER LAYOUT (HB BUILDING)

SCALE : 1:250 M



NOTE:
1. REPLACEMENT OF OUTLETS
2. REWIRING

2 SECOND FLOOR POWER LAYOUT (HB BUILDING)

SCALE : 1:250 M



Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:

PROPOSED REHABILITATION OF SAN
BARTOLOME HIGH SCHOOL

LOCATION:
BARANGKAY SAN BARTOLOME, DISTRICT 5, QUEZON CITY

DESIGNED BY:

DATE:

CHECKED BY:

SUBMITTED BY:

ENGR. LEO S. DEL ROSARIO
HEAD, PLANNING & PROGRAMS DIVISION

RECOMMENDING APPROVAL:

ENGR. ISAGAN R. VERZOSA, JR.
DEPUTY CITY ENGINEERING OFFICER

APPROVED BY:

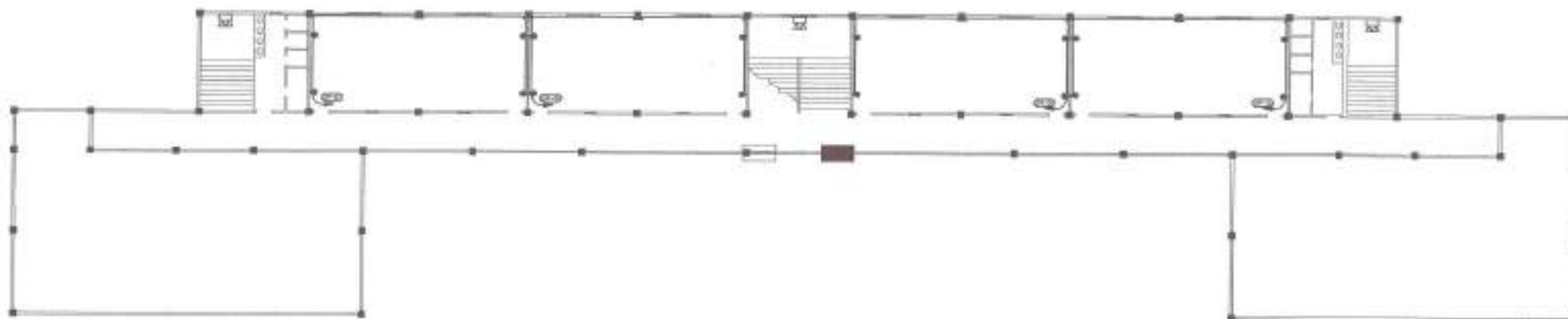
HON. MA. JOSEFINA G. BELMONTE
CITY MAYOR

SHEET CONTENT

GROUND FLOOR
POWER LAYOUT
(HB BUILDING)
SECOND FLOOR
POWER LAYOUT
(HB BUILDING)

SHEET NO.

EL-19
35/36

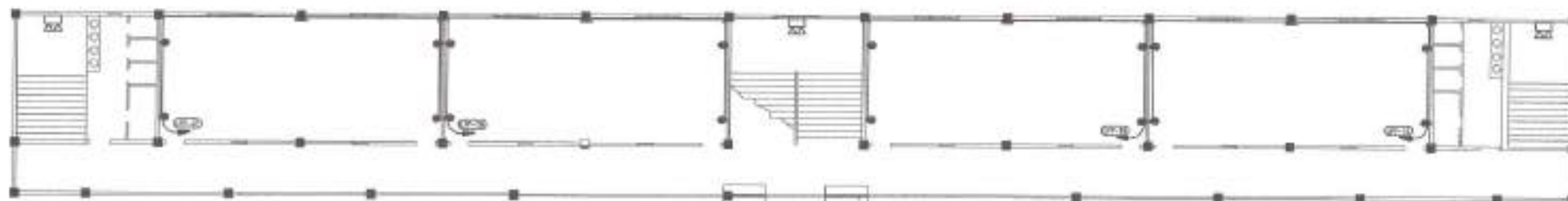


NOTE:

1. REPLACEMENT OF OUTLETS
2. REWIRING

1 THIRD FLOOR LIGHTING LAYOUT (HB BUILDING)

SCALE : 1:250 M



NOTE:

1. REPLACEMENT OF OUTLETS
2. REWIRING

2 FOURTH FLOOR LIGHTING LAYOUT (HB BUILDING)

SCALE : 1:200 M



Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:

**PROPOSED REHABILITATION OF SAN
BARTOLOME HIGH SCHOOL**

Location:
BARANGAY SAN BARTOLOME, DISTRICT 5, QUEZON CITY

DRAWN BY:

DATE:

CHECKED BY:

REVISIONS:

SUBMITTED BY:

ENGR. LEO S. DEL ROSARIO
HEAD, PLANNING & PROGRAMMING DIVISION

RECOMMENDING APPROVAL:

ENGR. ISAGANI R. VERZOSA, JR.
OC, CIVIL ENGINEERING DIVISION

APPROVED BY:

HON. MA. JOSEFINA G. BELMONTE
CITY ENGINEER

SHEET CONTENT

THIRD FLOOR
POWER LAYOUT
(HB BUILDING)
FOURTH FLOOR
POWER LAYOUT
(HB BUILDING)

SHEET NO.

EL-20
36/36

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 REHABILITATION OF SAN BARTOLOME HIGH SCHOOL

LOCATION : BARANGAY SAN BARTOLOME, DISTRICT 5, QUEZON CITY

PROJECT NO. : 22 - 00173

DURATION : One Hundred Eighty (180) Calendar Days

BREAKDOWN OF COST

Item Code	Item of Work (Description)	MATERIALS COST	LABOR COST	INDIRECT COST	AGGREGATE COST
GR	GENERAL REQUIREMENTS				
OGR	OTHER GENERAL REQUIREMENTS				
I	UPGRADING OF MAIN SERVICE ENTRANCE				
II	MATHAY BUILDING				
III	HB BUILDING				
IV	NEW BUILDING				
V	SB 2 BUILDING				
VI	SB 1 BUILDING				
VII	COVERED COURT				
VIII	SIDEWALK				
IX	GROUPS PLUMBING AND STORM DRAIN SYSTEM				

TOTAL COST P _____

LUMP SUM BID IN WORDS : _____

Contractor : _____

BILL OF QUANTITIES
(Building Construction/Rehabilitation Project)

PROJECT TITLE : PROPOSED REHABILITATION OF SAN BARTOLOME HIGH SCHOOL

LOCATION : BARANGAY SAN BARTOLOME, DISTRICT 5, QUEZON CITY

PROJECT NO. : 22 - 00173

DURATION : One Hundred Eighty (180) Calendar Days

SCOPE OF WORKS :

GR General Requirements include billboard(s).

OGR Other General Requirements (Non - O.C.M.) include, but not limited to:

- 1 Temporary water system including water meter/sub-meter and connections.
- 2 Temporary electrical system including electric meter/sub-meter and connections.
- 3 Clearing, hauling and disposal of construction materials and debris.
- 4 Scaffolding for general use (rental).

I Upgrading of Main Service Entrance

I-SW Site Works

- 1 Demolition/removal works.

I-EW Electrical Works:

- 1 Installation of roughing-ins and wirings.
- 2 Installation of system devices, components, panelboards, and accessories.

I-UTI Utility and Ancillary Works

- 1 Installation of ground well/pit

II Mathay Building

II-SW Site Works

- 1 Demolition/removal works.
- 2 Clearing and cleaning for painting preparation.

II-CWS Civil / Structural Works:

- 1 Masonry works include laying of CHB, restoration of concrete and plastering works.
- 2 Roofing works include installation of G.I. Gutter

II-AW Architectural Works (Finishes as indicated in the plans):

- 1 Ceiling works include installation of ceilings with framings.
- 2 Painting works include painting for exterior and interior walls, metal surfaces and ceilings.
- 3 Fabricated materials include installation of doors and windows.

II-EW Electrical Works:

- 1 Installation of roughing-ins and wirings.
- 2 Installation of system devices, energy efficient lighting fixtures and components, panelboards, and accessories.

III HB Building

III-SW Site Works

- 1 Demolition/removal works.
- 2 Clearing and cleaning for painting preparation.

III-CWS Civil / Structural Works:

- 1 Masonry works include restoration of concrete pathwalk and plastering works.
- 2 Roofing works include installation of roofing and bended materials.

III-AW Architectural Works (Finishes as indicated in the plans):

- 1 Floor finishes include installation of floor tiles
 - 2 Wall Finishes include installation of wall tiles and cladding
 - 3 Ceiling works include installation of ceilings with framings.
 - 4 Painting works include painting for exterior and interior walls, metal surfaces and ceilings.
- III-S/PW Sanitary/Plumbing Works:
- 1 Installation of roughing-ins, valves, appurtenances and supports.
 - 2 Installation of water efficient sanitary/plumbing fixtures and accessories.
- III-EW Electrical Works:

1	Installation of roughing-ins and wirings.
2	Installation of system devices, energy efficient lighting fixtures and components, panelboards, and accessories.
III-UTI	Utility and Ancillary Works
1	Installation of hand hole and construction of pathwalk.
IV	New Building
IV-AW	Architectural Works (Finishes as indicated in the plans):
1	Painting works include painting for exterior and interior walls, metal surfaces and ceilings.
V	SB 2 Building
V-SW	Site Works
1	Demolition/removal works.
V-CWS	Civil / Structural Works:
1	Masonry works include restoration of concrete and plastering works.
V-AW	Architectural Works (Finishes as indicated in the plans):
1	Painting works include painting for interior walls.
V-EW	Electrical Works:
1	Installation of roughing-ins and wirings.
2	Installation of system devices, components, panelboards, and accessories.
VI	SB 1 BUILDING
VI-SW	Site Works
1	Demolition/removal works.
VI-CWS	Civil / Structural Works:
1	Masonry works include restoration of concrete and plastering works.
VI-AW	Architectural Works (Finishes as indicated in the plans):
1	Painting works include painting for interior walls.
VI-EW	Electrical Works:
1	Installation of roughing-ins and wirings.
2	Installation of system devices, components, panelboards, and accessories.
VII	COVERED COURT
VII-EW	Electrical Works:
1	Installation of roughing-ins and wirings.
2	Installation of system devices, components, panelboards, and accessories.
VIII	SIDEWALK
	Land Development Works
1	Concrete works include concreting, installation of reinforcing steel bars, and formworks.
IX	GROUND PLUMBING AND STORM DRAIN SYSTEM
IX-SW	Site Works
1	Layout and Staking
2	Site Clearing and Preparation
3	Excavation works
IX-CWS	Civil / Structural Works:
1	Masonry Works include restoration of concrete.
IX-S/PW	Sanitary/Plumbing Works:
1	Installation of roughing-ins, valves, appurtenances and supports.
IX-EW	Electrical Works:
1	Installation of roughing-ins and wirings.
2	Installation of system devices, components, panelboards, and accessories.

- IX-UTI Utility and Ancillary Works
- 1 Construction of 2 layer line canal with steel grating
 - 2 Installation of booster pumps
 - 3 Installation of water tanks and pressure tanks.
- O Others (included in O.C.M)**
- 1 Provision of construction, health and safety such as safety gears, medicine kit, etc.
 - 2 Preparation of shop drawings, as necessary.
 - 3 Preparation of as-built plans (signed and sealed by the respective professional(s)).
 - 4 Testing and commissioning works shall be performed as per standard procedures.

ITEM CODE	WORK DESCRIPTION & SCOPE OF WORKS	QTY.	UNIT	UNIT COST	TOTAL COST
GR	GENERAL REQUIREMENTS				
SPL7	Billboard (1.20m x 2.40m in Plywood)	1	piece	₱	₱
			MATERIALS COST GR		₱
			LABOR COST GR		
			DIRECT COST GR		₱

ITEM CODE	WORK DESCRIPTION & SCOPE OF WORKS	QTY.	UNIT	UNIT COST	TOTAL COST
OGR	OTHER GENERAL REQUIREMENTS				
OGR0301	Temporary Water Facility	1	unit	₱	₱
OGR0302	Temporary Electrical Facility	1	unit		
		Subtotal OGR02c - OGR0302			
OGR01	Clearing, Hauling and Disposal of Construction Materials and Debris	143	t.l.	₱	₱
OGR05	Scaffolding (Rental)	3,181	sq.m.		
		Subtotal OGR01 - OGR05			
		MATERIALS COST OGR			₱
		LABOR COST OGR			
		DIRECT COST OGR			₱
I	UPGRADING OF MAIN SERVICE ENTRANCE				
I-SW	Site Works				
DEM004	Demolition of Existing Structure (Wall)	2	cu.m	₱	₱
		Direct Cost I-SW			₱
I-EW	Electrical Works				
EW01	Pipes				
EW0102	25mmØ PVC Pipe	1	piece	₱	₱
EW0117	80mmØ IMC Pipe	2	piece		
EW0118	90mmØ IMC Pipe	3	piece		
EW05	Fittings and Accessories				
EW05011	25mmØ PVC Adaptor	2	piece		
EW05023	25mmØ PVC Locknut and Bushing	2	pair		
EW05038	80mmØ IMC Elbow	3	piece		
EW05039	90mmØ IMC Elbow	3	piece		
EW05048	80mmØ IMC Locknut and Bushing	4	pair		
EW05049	90mmØ IMC Locknut and Bushing	6	pair		
EW05145	125mm² Ø Solderless Connector with Two-Bolt	8	pair		
EW05149	250mm² Ø Solderless Connector with Two-Bolt	24	pair		
EW05160	80mmØ Weatherproof Entrance Cap, Diecast Type	2	piece		
EW05161	90mmØ Weatherproof Entrance Cap, Diecast Type	3	piece		
EW05164	Secondary Rack with 3-Spool, Heavy Duty	19	assy		
EW12	Grounding System				
EW1202	20mm Ø x 3000mm Grounding Rod with Ground Clamp	3	set		
EW1203	Oval Eyebolt with Nut	1	piece		
EW1216	Powder for GT Connection	3	tube		

ITEM CODE	WORK DESCRIPTION & SCOPE OF WORKS	QTY.	UNIT	UNIT COST	TOTAL COST
EW09	Wires and Cables				
EW0901	THHN Wires				
EW090114	150mm ² THHN Wire	30	l.m.		
EW090117	250mm ² THHN Wire	45	l.m.		
EW0902	THW Wires				
EW090213	125mm ² THW Wire	650	l.m.		
EW090217	250mm ² THW Wire	195	l.m.		
EW0903	TW Wires				
EW090307b	30mm ² TW Wire	260	l.m.		
EW090310	60mm ² TW Wire	125	l.m.		
EW0904	Bare Copper Wires (Stranded)				
EW090409	50mm ² Bare Copper Wire	15	l.m.		

ITEM CODE	WORK DESCRIPTION & SCOPE OF WORKS	QTY.	UNIT	UNIT COST	TOTAL COST
EW13	Panel board				
EW 1301	Main Breaker (Bolt-On)				
ASSY	Main: 800AT, 3P, 230V, MCCB 1-150AT, 3P, 230V 1-400AT, 3P, 230V 1-600AT, 3P, 230V Enclosure: NEMA 3R with Ground Terminals and Terminal Lugs	1	assy		
EW16	Pipe Hangers and Supports				
EW1602	Vertical Layout of Pipe	15	l.m.		
MC	Miscellaneous and Consumables				
MC/G	(Common Items)				
MC/G06	Hacksaw Blade	3	piece		
MC/G13	All Around Sealant	2	tube		
MC/G18	Waste Cloth	5	kg		
MC/G37	G.I. Tie Wire, Ga.16 (for Wire / Cable Pulling)	3	kg		
MC/E	(Electrical Works)				
MC/E01	Electrical Tape	10	roll		
MC/E04	Rubber Tape	7	roll		
MC/E12	16mmØ Nylon Rope	50	l.m.		
				Materials Cost I-EW	₱
				Labor Cost I-EW	
				Direct Cost I-EW	₱
UTI	Utility and Ancillary Works				
SW	Site Works				
106	Excavation	1	cu.m.	₱	₱
				Subtotal I - UTI - SW (Labor)	₱
UT010302	Earth Pit 0.30 x 0.30 x 0.30	1	unit	₱	₱
				Materials Cost I-UT010302	₱
				Labor Cost I-UT010302	
				Subtotal I-UT010302	₱
				Materials Cost I-UTI	₱
				Labor Cost I-UTI	
				Direct Cost I-UTI	₱
				MATERIALS COST I	₱
				LABOR COST I	
				DIRECT COST I	₱

ITEM CODE	WORK DESCRIPTION & SCOPE OF WORKS	QTY.	UNIT	UNIT COST	TOTAL COST
II	MATHAY BUILDING				
II-SW	Site Works				
DEMV001	Chipping of Concrete Wall (Electrical Works)	106	cu.m.	₱	₱
DEMV010	Removal of Existing Door Jamb and Door Including Hardware and Accessories	46	set		
DEMV015	Removal of Existing Ceiling Including Framing	378	sq.m.		
DEMV027	Removal of Existing Window Panel Including Hardware and Accessories	195	sq.m.		
SW03	Clearing and Cleaning for Painting Preparation	4,254	sq.m.		
		Direct Cost II-SW (Labor)			₱

ITEM CODE	WORK DESCRIPTION & SCOPE OF WORKS	QTY.	UNIT	UNIT COST	TOTAL COST
II-CWS	CIVIL / STRUCTURAL WORKS				
CWSMA	Masonry Works				
CWSMA04	150mm CHB Wall Laying, including Mortar, Reinforcement and Two-Face Plastering	21	sq.m.	₱	₱
CWSMA11	Restoration of Concrete (Electrical Works)	166	sq.m.		
CWSPRW	Roofing Works				
CWSPRW0706	Pre-painted G.I. gutter	63	l.m.		
				Materials Cost II-CWS	₱
				Labor Cost II-CWS	
				Direct Cost II-CWS	₱
II-AW	Architectural Works				
AW02	Ceiling Finishes				
AW0202	12mm Thick Moisture Resistant Gypsum Board Including Metal Framing	378	sq.m.	₱	₱
AWP	Painting Works				
AWP0101	Flat Latex Paint Finish (Interior Walls)	2,404	sq.m.		
AWP0102	Elastomeric Paint Finish (Exterior Walls)	733	sq.m.		
AWP0105	Flat Latex Paint Finish (Ceiling)	1,124	sq.m.		
AWP0106	Epoxy Enamel Paint Finish (Steel Surfaces)	208	sq.m.		
				Materials Cost II AW02 - AWP	₱
				Labor Cost II AW02 - AWP	
				Subtotal II AW02 - AWP	₱
AW01	Fabricated Materials				
AWD	Installation of Doors				
AWD010238	D1 - (0.90m x 2.10m) Panel Door with Transom	28	set	₱	₱
AWD010236	D2 - (0.60m x 1.8m) PVC Door	12	set		
AWD010237	D3 - (1.2m x 1.8m) PVC Door Double Leaf	6	set		
AWW	Installation of Windows				
AWW06	W1 - (2.7m x 1.8m) Jalousie Window	194	sq.m		
AWW06	W2 - (2.0m x 0.5m) Jalousie Window	11	sq.m		
				Materials Cost II-AW01	₱
				Labor Cost II-AW01	
				Subtotal II- AW01	₱
				Materials Cost II-AW	₱
				Labor Cost II-AW	
				Direct Cost II-AW	₱
II-EW	Electrical Works				
EW01	Pipes				
EW0101	20mmØ PVC Pipe	384	piece	₱	₱

ITEM CODE	WORK DESCRIPTION & SCOPE OF WORKS	QTY.	UNIT	UNIT COST	TOTAL COST
EW0104	40mmØ PVC Pipe	8	piece		
EW0108	90mmØ PVC Pipe	10	piece		
EW0116	65mmØ IMC Pipe	1	piece		
EW04	Mouldings				
EW0403	16mm x 16mm x 2.44m Rectangular PVC Moulding	625	piece		
EW05	Fittings and Accessories				
EW05001	20mmØ PVC Elbow	182	piece		
EW05004	40mmØ PVC Elbow	5	piece		
EW05007	80mmØ PVC Elbow	6	piece		
EW05010	20mmØ PVC Adaptor	421	piece		
EW05013	40mmØ PVC Adaptor	9	piece		
EW05016	80mmØ PVC Adaptor	3	piece		
EW05022	20mmØ PVC Locknut and Bushing	421	pair		

ITEM CODE	WORK DESCRIPTION & SCOPE OF WORKS	QTY.	UNIT	UNIT COST	TOTAL COST
EW05025	40mmØ PVC Locknut and Bushing	9	pair		
EW05028	80mmØ PVC Locknut and Bushing	3	pair		
EW05037	65mmØ IMC Elbow	2	piece		
EW05047	65mmØ IMC Locknut and Bushing	3	pair		
EW05057	65mmØ IMC Coupling	3	piece		
EW05145	125mm ² Ø Solderless Connector with Two-Bolt	2	pair		
EW05159	65mmØ Weatherproof Entrance Cap, Diecast Type	1	piece		
EW06	Boxes and Fabricated Pullbox				
EW0601	50mm x 100mm PVC Utility Box	130	piece		
EW0602	100mm x 100mm PVC Junction Box with Cover	80	piece		
EW09	Wires and Cables				
EW0901	THHN Wires				
EW090102a	3.5mm ² THHN Wire	42	roll		
EW090107b	30mm ² THHN Wire	48	l.m.		
EW090112	100mm ² THHN Wire	60	l.m.		
EW0903	TW Wires				
EW090302a	3.5mm ² TW Wire	21	roll		
EW090304b	8.0mm ² TW Wire	24	l.m.		
EW090307b	30mm ² TW Wire	30	l.m.		
EW10	Wiring Devices and Other Fixtures				
EW1001	Convenience Outlet with Grounding, One-Gang	3	piece		
EW1002	Convenience Outlet with Grounding, Two-Gang	70	piece		
EW1015	Switch with Plate and Cover, One-Gang	17	piece		
EW1016	Switch with Plate and Cover, Two-Gang	10	piece		
EW11	Lighting fixtures (Energy Efficient)				
EW11059	Emergency Light, Twinhead	3	piece		
EW11067	Surface Mounted Box Type Lighting Fixture with 1-18W Daylight LED Tube	33	set		
EW11068	Surface Mounted Box Type Lighting Fixture with 2-18W Daylight LED Tube	40	set		
EW11140	Orbit Fan with Selector Switch	20	set		
EW12	Grounding System				
EW1201	16mm Ø x 3000mm Grounding Rod (Copper Clod) with Ground Clamp	1	piece		
EW1203	Oval Eyebolt	1	piece		
EW13	Panel Board				
ASSY	Main: 225AT, 2P, 230V Branches: 3 - 100 AT, 2P, 230V 1 - 50 AT, 2P, 230V Enclosure: NEMA 3R with Ground Terminals and Terminal Lugs	1	assy		
ASSY	LPP A Main: 100AT, 2P, 230V	1	assy		

ITEM CODE	WORK DESCRIPTION & SCOPE OF WORKS	QTY.	UNIT	UNIT COST	TOTAL COST
	Branches: 8 - 20 AT, 2P, 230V 4 - 30 AT, 2P, 230V , Spare Enclosure: NEMA 3R with Ground Terminals and Terminal Lugs				
ASSY	LPP B and C Main: 100AT, 2P, 230V Branches: 10 - 20 AT, 2P, 230V 2 - 30 AT, 2P, 230V , Spare Enclosure: NEMA 3R with Ground Terminals and Terminal Lugs	2	assy		
EW16	Pipe Hangers and Supports				
EW1601	Horizontal Layout of Pipe	500	l.m.		
EW1602	Vertical Layout of Pipe	10	l.m.		
MC	Miscellaneous and Consumables				
MC/G	(Common Items)				
MC/G06	Hacksaw Blade	3	piece		

ITEM CODE	WORK DESCRIPTION & SCOPE OF WORKS	QTY.	UNIT	UNIT COST	TOTAL COST
MC/G13	All Around Sealant	2	tube		
MC/G14	Solvent Cement, 400cc	18	can		
MC/G17	Torch with Butane	2	piece		
MC/G18	Waste Cloth	7	kg		
MC/G37	G.I. Tie Wire, Ga.16 (for Wire / Cable Pulling)	6	kg		
MC/E	(Electrical Works)				
MC/E01	Electrical Tape	10	roll		
MC/E03	Pulling Lubricant	7	can		
MC/E04	Rubber Tape	10	roll		
				Materials Cost II-EW	₱
				Labor Cost II-EW	
				Direct Cost II-EW	₱
				MATERIAL COST II	₱
				LABOR COST II	
				DIRECT COST II	₱
III	HB BUILDING				
III-SW	Site Works				
DEMV001	Chipping of Concrete Wall (Electrical Works)	15	cu.m	₱	₱
DEMV015	Removal of Existing Ceiling Including Framing	617	sq.m.		
DEMV021	Removal of Existing Floor Tiles	1,268	sq.m.		
DEMV021	Removal of Existing Wall Tiles	1,229	sq.m.		
DEMV025a	Removal of Existing Polycarbonate Roof	51	sq.m.		
DEMV025a	Removal of Existing Rib Type Roof	683	sq.m.		
DEMV004	Removal of Existing Lab Desks	208	sq.m.		
SW03	Clearing and Cleaning for Painting Preparation	10,695	sq.m.		
				Direct Cost III-SW (Labor)	₱
III-CWS	Civil / Structural Works				
CWSMA	Masonry Works				
CWSMA11	Floor Topping For Preparation of Tiles Works	1,356	sq.m.	₱	₱
CWSMA11	Restoration of Concrete (Electrical Works)	305	sq.m		
CWSPRW	Roofing Works				
CWSPRW0701	Pre-Painted G.I. Rib Type Long Span Metal Roofing Sheet, 045mm Thick GA 15 with Connection Accessories	717	sq.m.		
CWSPRW0706	Pre-Painted G.I. gutter	51	l.m.		
CWSPRW0308	Solid Wall, 6.00 mm Thick with Connection Accessories (Any Color)	54	sq.m.		
MC	Miscellaneous and Consumables				
MC/G13	All Purpose Sealant	5	tube		
				Materials Cost III-CWS	₱

ITEM CODE	WORK DESCRIPTION & SCOPE OF WORKS	QTY.	UNIT	UNIT COST	TOTAL COST
			Labor Cost III-CWS		
			Direct Cost III-CWS		₱
III-AW	Architectural Works				
AW04	Floor Finishes				
AW0402	400mm x 400mm Non-Skid Homogeneous Floor Tiles	1,331	sq.m.	₱	₱
AW03	Wall Finishes				
AW0338	400mm x 600mm Homogenous Wall Tiles	1,291	sq.m.		
AWCM0301	4mm thick Aluminum Composite Panel Cladding	81	sq.m.		
AW02	Ceiling Finishes				
AWCM0101	Acoustic Board, 2' x 2' x 18mm	648	sq.m.		

ITEM CODE	WORK DESCRIPTION & SCOPE OF WORKS	QTY.	UNIT	UNIT COST	TOTAL COST
AWP	Painting Works				
AWP0101	Flat Latex Paint Finish (Interior Walls)	4,308	sq.m.		
AWP0102	Elastomeric Paint Finish (Exterior Walls)	3,314	sq.m.		
AWP0105	Flat Latex Paint Finish (Ceiling)	3,608	sq.m.		
				Materials Cost III-AW	₱
				Labor Cost III-AW	
				Direct Cost III-AW	₱
III-S/PW	Sanitary Works				
S/PW01	Sewer Line / Storm Drainage System				
S/PW0101	Roughing-Ins				
S/PW010102	50mmØ P-Trap	44	piece	₱	₱
S/PW010103	75mmØ P-Trap	32	piece		
S/PW02	Waterline System				
S/PW020102	PPR Pipe				
S/PW02010201	20mmØ PPR Pipe	3	piece		
S/PW02010202	32mmØ PPR Pipe	21	piece		
S/PW02010205	50mmØ PPR Pipe	26	piece		
S/PW02010215	50mmØ x 50mmØ Tee Equal	3	piece		
S/PW02010221	32mmØ x 20mmØ Unequal Tee	60	piece		
S/PW02010228	50mmØ x 32mmØ Unequal Tee	14	piece		
S/PW02010259	32mmØ 90° Elbow	24	piece		
S/PW02010261	50mmØ 90° Elbow	3	piece		
S/PW02010274	20mmØ End Cap	76	piece		
S/PW02010286	20mmØ Coupling	3	piece		
S/PW02010288	32mmØ Coupling	21	piece		
S/PW02010290	50mmØ Coupling	26	piece		
S/PW03	Sanitary Fixtures, Fittings and Accessories				
S/PW0301	Bidet, Heavy-Duty, Stainless with Complete Accessories (Water Efficient)	32	unit		
S/PW0308	Lavatory, Counter Top	32	set		
S/PW0311	Lavatory Faucet, Lever Type, Stainless, Heavy Duty (Water Efficient)	32	set		
S/PW0321	Urinal, Flush Valve (Water Efficient)	12	set		
S/PW0327	Water Closet, Tank Type (Water Efficient)	32	set		
S/PW04	Comfort Room Accessories				
S/PW0406	Metal Door Hook	32	piece		
S/PW05	Plumbing Fixtures, Fittings and Accessories				
S/PW0501	Angle Valve, Single-Way Stainless Steel	32	piece		
S/PW0502	Angle Valve, Two-Way Stainless Steel	32	piece		
S/PW0503	Flexible Hose, Stainless	64	piece		
S/PW07	Pipe Hangers and Supports				
S/PW0705	For Horizontal Pipes Less Than 50mmØ (2m interval)	96	l.m.		

ITEM CODE	WORK DESCRIPTION & SCOPE OF WORKS	QTY.	UNIT	UNIT COST	TOTAL COST
S/PW0706	For Horizontal Pipes Greater Than 50mmØ (1m interval)	200	l.m.		
MC	Miscellaneous				
MC/G06	Hacksaw Blade	5	piece		
MC/G15	Teflon Tape	13	roll		
MC/G18	Waste Cloth	5	kg		
MC/G26	15mmØ Concrete Drill Bit	19	piece		
			Materials Cost III-S/PW		₱
			Labor Cost III-S/PW		
			Direct Cost III-S/PW		₱
III-EW	Electrical Works				
EW01	Pipes				
EW0101	20mmØ PVC Pipe	950	piece	₱	₱
EW0104	40mmØ PVC Pipe	15	piece		
EW0106	65mmØ PVC Pipe	63	piece		
EW0115	50mmØ IMC Pipe	1	piece		

ITEM CODE	WORK DESCRIPTION & SCOPE OF WORKS	QTY.	UNIT	UNIT COST	TOTAL COST
EW040	Mouldings				
EW0403	16mm x 16mm x 2.44m Rectangular PVC Moulding	1,898	piece		
EW05	Fittings and Accessories				
EW05001	20mmØ PVC Elbow	120	piece		
EW05004	40mmØ PVC Elbow	4	piece		
EW05006	65mmØ PVC Elbow	5	piece		
EW05010	20mmØ PVC Adaptor	535	piece		
EW05013	40mmØ PVC Adaptor	8	piece		
EW05015	65mmØ PVC Adaptor	2	piece		
EW05022	20mmØ PVC Locknut and Bushing	535	pair		
EW05025	40mmØ PVC Locknut and Bushing	8	pair		
EW05027	65mmØ PVC Locknut and Bushing	2	pair		
EW05046	50mmØ IMC Locknut and Bushing	2	pair		
EW05149	250mm ² Ø Solderless Connector with Two-Bolt	4	pair		
EW05056	50mmØ IMC Coupling	2	piece		
EW05158	50mmØ Weatherproof Entrance Cap	1	piece		
EW06	Boxes and Favricated Pullbox				
EW0601	50mm x 100mm PVC Utility Box	250	piece		
EW0602	100mm x 100mm PVC Junction Box with Cover	285	piece		
EW0610	Fabricated Pull Box, 12" x 12" x 8" @ 0.16 (0.30m x 0.30m x 0.20m)	1	piece		
EW09	Wires and Cables				
EW0901	THHN Wires				
EW090102a	3.5mm ² THHN Wire	105	roll		
EW090107b	30mm ² THHN Wire	135	l.m.		
EW090111	80mm ² THHN Wire	585	l.m.		
EW0903	TW Wires				
EW090302a	3.5mm ² TW Wire	20	roll		
EW090304b	8mm ² TW Wire	45	l.m.		
EW090306b	22mm ² TW Wire	195	l.m.		
EW13	Panel Board				
ASSY	MDP Main: 200AT, 3P, 230V Branches: 4 - 100 AT, 3P, 230V 1 - 50 AT, 2P, 230V 1 - 60 AT, 2P, 230V 2 - 30 AT, 2P, 230V Enclosure: NEMA 3R with Ground Terminals and Terminal Lugs	1	assy		
ASSY	LPP A and B Main: 100AT, 3P, 230V Branches: 16 - 20 AT, 2P, 230V 2 - 30 AT, 2P, 230V , Spare	2	assy		

ITEM CODE	WORK DESCRIPTION & SCOPE OF WORKS	QTY.	UNIT	UNIT COST	TOTAL COST
	Enclosure: NEMA 3R with Ground Terminals and Terminal Lugs				
ASSY	LPP C and D Main: 100AT, 3P, 230V Branches: 12 - 20 AT, 2P, 230V 2 - 30 AT, 2P, 230V , Spare Enclosure: NEMA 3R with Ground Terminals and Terminal Lugs	2	assy		
EW10	Wiring Devices and Other Fixtures				
EW1001	Convenience Outlet with Grounding, One-Gang	12	piece		
EW1002	Convenience Outlet with Grounding, Two-Gang	80	piece		
EW1015	Switch with Plate and Cover, One-Gang	30	piece		
EW1016	Switch with Plate and Cover, Two-Gang	40	piece		

ITEM CODE	WORK DESCRIPTION & SCOPE OF WORKS	QTY.	UNIT	UNIT COST	TOTAL COST
EW11	Lighting Fixtures (Energy Efficient)				
EW11140	Orbit Fan with Selector Switch	80	set		
EW11059	Emergency Light, Twinhead	12	piece		
EW11067	Surface Mounted Box Type Lighting Fixture with 1-18W Daylight LED Tube	283	set		
EW16	Pipe Hangers and Supports				
EW1601	Horizontal Layout of Pipe	1,500	l.m.		
EW1602	Vertical Layout of Pipe	5	l.m.		
MC	Miscellaneous and Consumables				
MC/G06	Hacksaw Blade	3	roll		
MC/G13	All Around Sealant	4	tube		
MC/G14	Solvent Cement, 400cc	50	can		
MC/G17	Torch with Butane	6	set		
MC/G18	Rugs	5	kg		
MC/G37	G.I. Tie Wire, Ga.16 (for Wire / Cable Pulling)	3	kg		
MC/E01	Electrical Tape	10	roll		
MC/E03	Pulling Lubricant	15	gal		
MC/E04	Rubber Tape	7	roll		
			Materials Cost III-EW		₱
			Labor Cost III-EW		
			Direct Cost III-EW		₱
III-UTI	Utility and Ancillary Works				
III-UTI-I	Site Works				
106	Excavation	27	cu.m.	₱	₱
			Subtotal III-UTI-I (Labor)		₱
III-UTI-II	Civil/Structural Works				
SPL9	Concrete Pathwalk (0.15 m. thick)	80	sq.m	₱	₱
CWSMA14	Floor Topping 50mm with Plain Cement Finish	9	sq.m.		
UT010202	Hand Hole (0.4 x 0.4 x 0.35)	4	unit		
UT010803	Concrete Encasement(0.40m Width X 0.35m	189	l.m.		
			Materials Cost III-UTI-II		₱
			Labor Cost III-UTI-II		
			Subtotal III-UTI-II		₱
			Materials Cost III-UTI		₱
			Labor Cost III-UTI		
			Direct Cost III-UTI		₱
			MATERIAL COST III		₱
			LABOR COST III		
			DIRECT COST III		₱

ITEM CODE	WORK DESCRIPTION & SCOPE OF WORKS	QTY.	UNIT	UNIT COST	TOTAL COST
IV	NEW BUILDING				
IV-AW	Architectural Works				
AWP	Painting Works				
AWP0101	Flat Latex Paint Finish (Interior Wall - 3 Coats)	6,411	sq.m.	₱	₱
AWP0102	Elastomeric Paint Finish (Exterior Wall - 3 Coats)	2,683	sq.m.		
AWP0105	Flat Latex Paint Finish (Ceiling - 3 Coats)	719	sq.m.		
AWP0106	Epoxy Enamel Paint Finish (Steel Member - 3 Coats)	2,738	sq.m.		
AWP0109	Flat Latex Paint Finish (Dry Wall - 3 coats)	230	sq.m.		
				MATERIAL COST IV	₱
				LABOR COST IV	
				DIRECT COST IV	₱

ITEM CODE	WORK DESCRIPTION & SCOPE OF WORKS	QTY.	UNIT	UNIT COST	TOTAL COST
V	SB 2 BUILDING				
V-SW	Site Works				
DEMV001	Chipping of Concrete Wall (Electrical Works)	1	cu.m.	₱	₱
				Direct Cost V-SW	₱
V-CWS	Civil / Structural Works				
CWSMA	Masonry Works				
CWSMA11	Restoration of Concrete (Electrical Works)	3	sq.m	₱	₱
				Materials Cost V-CWS	₱
				Labor Cost V-CWS	
				Direct Cost V-CWS	₱
V-AW	Architectural Works				
AWP01	Painting Works				
AWP0101	Flat Latex Paint Finish (Interior Wall - 3 Coats)	3	sq.m	₱	₱
				Materials Cost V-AW	₱
				Labor Cost V-AW	
				Direct Cost V-AW	₱
V-EW	Electrical Works				
EW01	Pipes				
EW0103	32mmØ PVC Pipe	17	piece	₱	₱
EW0106	65mmØ PVC Pipe	1	piece		
EW0115	50mmØ IMC Pipe	1	piece		
EW05	Fittings and Accessories				
EW05003	32mmØ PVC Elbow	5	piece		
EW05006	65mmØ PVC Elbow	1	piece		
EW05012	32mmØ PVC Adaptor	8	piece		
EW05015	65mmØ PVC Adaptor	2	piece		
EW05024	32mmØ PVC Locknut and Bushing	8	pair		
EW05027	65mmØ PVC Locknut and Bushing	2	pair		
EW05046	50mmØ IMC Locknut and Bushing	2	pair		
EW05056	50mmØ IMC Coupling	2	piece		
EW05149	250mm² Ø Solderless Connector with Two-Bolt	4	pair		
EW05158	50mmØ Weatherproof Entrance Cap	1	piece		
EW09	Wires and Cables				
EW0901	THHN Wires				
EW090105b	14mm² THHN Wire	100	l.m.		
EW090109	50mm² THHN Wire	45	l.m.		
EW0903	TW Wires				
EW090304b	8.0mm² TW Wire	50	l.m.		

ITEM CODE	WORK DESCRIPTION & SCOPE OF WORKS	QTY.	UNIT	UNIT COST	TOTAL COST
EW090305b	14mm ² TW Wire	15	l.m.		
EW13	Panel Board				
ASSY	Main Distribution Panel Main: 150AT, 3P, 230V, MCCB Branches: 4 - 100 AT, 2P, 230V 2 - 40 AT, 2P, 230V Enclosure: NEMA1 with Ground Terminals and Terminal Lugs	1	assy		
ASSY	LPP (GROUND FLOOR) Main: 70AT, 2P, 230V, MCCB Branches: 13 - 20 AT, 2P, 230V 1 - 30 AT, 2P, 230V Enclosure: NEMA1 with Ground Terminals and Terminal Lugs	1	assy		

ITEM CODE	WORK DESCRIPTION & SCOPE OF WORKS	QTY.	UNIT	UNIT COST	TOTAL COST
ASSY	LPP (SECOND-FOURTH FLOOR) Main: 70AT, 2P, 230V, MCCB Branches: 11 - 20 AT, 2P, 230V 1 - 30 AT, 2P, 230V Enclosure: NEMA1 with Ground Terminals and Terminal Lugs	3	assy		
EW16	Pipe Hangers and Supports				
EW1602	Vertical Layout of Pipe	5	l.m.		
MC	Miscellaneous and Consumables				
MC/G07	Masking Tape	5	roll		
MC/G13	All around Sealant	2	tube		
MC/G14	Solvent Cement, 400cc	1	can		
MC/G37	G.I. Tie Wire, Ga.16 (for Wire / Cable Pulling)	3	kg		
MC/E01	Electrical Tape	5	roll		
MC/E03	Pulling Lubricant	1	gal		
MC/E04	Rubber Tape	3	roll		
				Materials Cost V-EW	₱
				Labor Cost V-EW	
				Direct Cost V-EW	₱
				MATERIAL COST V	₱
				LABOR COST V	
				DIRECT COST V	₱
VI	SB 1 BUILDING				
VI-SW	Site Works				
DEMV001	Chipping of Concrete Wall (Electrical Works)	1	cu.m.	₱	₱
				Direct Cost VI-SW (LABOR)	₱
VI-CWS	Civil / Structural Works				
CWSMA	Masonry Works				
CWSMA11	Restoration of Concrete (Electrical Works)	3	sq.m	₱	₱
				Materials Cost VI-CWS	₱
				Labor Cost VI-CWS	
				Direct Cost VI-CWS	₱
VI-AW	Architectural Works				
	Painting Works				
AWP0101	Flat Latex Paint Finish (Interior Wall - 3 Coats)	3	sq.m	₱	₱
				Materials Cost VI-AW	₱
				Labor Cost VI-AW	

ITEM CODE	WORK DESCRIPTION & SCOPE OF WORKS	QTY.	UNIT	UNIT COST	TOTAL COST
			Direct Cost VI-AW		₱
VI-EW	Electrical Works				
EW01	Roughing-ins				
EW0106	65mmØ PVC Pipe	1	piece	₱	₱
EW0115	50mmØ IMC Pipe	1	piece		
EW05	Fittings and Accessories				
EW05006	65mmØ PVC Elbow	2	piece		
EW05015	65mmØ PVC Adaptor	2	piece		
EW05027	65mmØ PVC Locknut and Bushing	2	pair		
EW05046	50mmØ IMC Locknut and Bushing	2	pair		
EW05056	50mmØ IMC Coupling	2	piece		
EW05145	125mm² Ø Solderless Connector with Two-Bolt	4	pair		
EW05158	50mmØ Weatherproof Entrance Cap, Diecast Type	1	piece		
EW09	Wires and Cables				

ITEM CODE	WORK DESCRIPTION & SCOPE OF WORKS	QTY.	UNIT	UNIT COST	TOTAL COST
EW0901	THHN Wires				
EW090105b	14.0mm ² THHN Wire	60	l.m.		
EW090111	80.0mm ² THHN Wire	54	l.m.		
EW0903	TW Wires				
EW090304b	8.0mm ² TW Wire	30	l.m.		
EW090306b	22.0mm ² TW Wire	18	l.m.		
EW13	Panel Board				
ASSY	Main Distribution Panel Main: 200AT, 2P, 230V, MCCB Branches: 4 - 70 AT, 2P, 230V Enclosure: NEMA1 with Ground Terminals and Terminal Lugs	1	assy		
ASSY	LPP (GROUND-THIRD FLOOR TYPICAL) Main: 70AT, 2P, 230V, MCCB Branches: 5 - 20 AT, 2P, 230V 4 - 30 AT, 2P, 230V 1 - 40 AT, 2P, 230V Enclosure: NEMA1 with Ground Terminals and Terminal Lugs	3	assy		
EW16	Pipe Hangers and Supports				
EW1602	Vertical Layout of Pipe	5	l.m.		
MC	Miscellaneous and Consumables				
MC/G07	Masking Tape	5	roll		
MC/G13	All around Sealant	1	can		
MC/G14	Solvent Cement, 400cc	1	can		
MC/G37	G.I. Tie Wire, Ga.16 (for Wire / Cable Pulling)	3	kg		
MC/E01	Electrical Tape	5	roll		
MC/E03	Pulling Lubricant	1	gal		
MC/E04	Rubber Tape	3	roll		
			Materials Cost VI-EW		₱
			Labor Cost VI-EW		
			Direct Cost VI-EW		₱
			MATERIAL COST VI		₱
			LABOR COST VI		
			DIRECT COST VI		₱
VII	COVERED COURT				
VII-EW	Electrical Works				
EW01	Pipes				
EW0102	25mmØ PVC Pipe	17	piece	₱	₱
EW05	Fittings and Accessories				
EW05011	25mmØ PVC Adaptor	2	piece		
EW05023	25mmØ PVC Locknut and Bushing	2	pair		

ITEM CODE	WORK DESCRIPTION & SCOPE OF WORKS	QTY.	UNIT	UNIT COST	TOTAL COST
EW05155	25mmØ Weatherproof Entrance Cap, Diecast Type	1	piece		
EW09	Wires and Cables				
EW0901	THHN Wires				
EW090103b	5.5mm² THHN Wire	90	l.m.		
EW090302b	TW Wires				
EW090302b	3.5mm² TW Wire	45	l.m.		
EW16	Pipe Hangers and Supports				
EW1602	Vertical Layout of Pipe	5	l.m.		
MC	Miscellaneous and Consumables				
MC/G06	Hacksaw Blade	1	roll		
MC/G18	Waste Cloth	2	kg		
MC/G37	Tie Wire, Ga.16 (for Wire / Cable Pulling)	2	kg		
MC/E01	Electrical Tape	3	roll		
MC/E04	Rubber Tape	3	roll		
			MATERIAL COST VII		₱
			LABOR COST VII		
			DIRECT COST VII		₱

ITEM CODE	WORK DESCRIPTION & SCOPE OF WORKS	QTY.	UNIT	UNIT COST	TOTAL COST
VIII	SIDEWALK				
	Land Development Works				
316b	P.C.C.P., 0.23 m. THK, 550 F, 14 days	15	sq.m.	₱	₱
		MATERIALS COST VIII			₱
			LABOR COST VIII		
			DIRECT COST VIII		₱
IX	GROUND PLUMBING AND STORM DRAIN SYSTEM				
IX-SW	Site Works				
SW01	Layout and Staking	55	sq.m	₱	₱
SW02	Site Clearing and Preparation	55	sq.m		
106	Excavation for Structures	14	cu.m		
		Direct Cost IX-SW (Labor)			₱
IX-CWS	Civil / Structural Works				
CWSMA	Masonry works				
CWSMA08	Restoration of Concrete (Plumbing Works)	55	sq.m	₱	₱
			Materials Cost IX-CWS		₱
			Labor Cost IX-CWS		
			Direct Cost IX-CWS		₱
IX-S/PW	Sanitary/Plumbing Works				
S/PW01	Sewer Line / Storm Drainage System				
S/PW0101	Roughing-Ins				
S/PW010105	150mmØ PVC Pipe with Hub	5	piece	₱	₱
S/PW010106	200mmØ PVC Pipe with Hub	10	piece		
S/PW02	Waterline System				
S/PW020102	PPR Pipe				
S/PW02010204	40mmØ PPR Pipe	9	piece		
S/PW02010205	50mmØ PPR Pipe	35	piece		
S/PW02010206	65mmØ PPR Pipe	58	piece		
S/PW02010232	65mmØ x 40mmØ Tee Unequal	12	piece		
S/PW02010215	50mmØ x 50mmØ Tee Equal	4	piece		
S/PW02010229	50mmØ x 40mmØ Unequal Tee	1	piece		
S/PW02010247	50mmØ x 40mmØ Reducer	1	piece		
S/PW02010260	40mmØ 90° Elbow	7	piece		
S/PW02010261	50mmØ 90° Elbow	20	piece		
S/PW02010280	40mmØ Union Patent	2	piece		
S/PW02010281	50mmØ Union Patent	6	piece		
S/PW02010289	40mmØ Coupling	9	piece		
S/PW02010290	50mmØ Coupling	35	piece		
S/PW0202	Valve and Appurtenances				

ITEM CODE	WORK DESCRIPTION & SCOPE OF WORKS	QTY.	UNIT	UNIT COST	TOTAL COST
S/PW020204	40mmØ Gate Valve PPR	2	piece		
S/PW020205	50mmØ Gate Valve PPR	6	piece		
S/PW020213	50mmØ Check Valve	3	piece		
S/PW07	Pipe Hangers and Supports				
S/PW0707	For vertical pipes greater than 50mmØ (1m interval)	2	l.m.		
MC	Miscellaneous and Consumables				
MC/G06	Hacksaw Blade	9	piece		
MC/G13	All Around Sealant	1	can		
MC/G14	Solvent Cement, 400cc	1	can		
MC/G15	Teflon Tape	1	roll		
MC/G18	Waste Cloth	5	kg		
MC/G26	15mmØ Concrete Drill Bit	17	piece		
			Materials Cost IX-S/PW		₱
			Labor Cost IX-S/PW		
			Direct Cost IX-S/PW		₱

ITEM CODE	WORK DESCRIPTION & SCOPE OF WORKS	QTY.	UNIT	UNIT COST	TOTAL COST
IX-EW	Electrical Works				
EW01	Pipes				
EW0111	25mmØ IMC Pipe	25	piece	₱	₱
EW05	Fittings and Accessories				
EW05033	25mmØ IMC Elbow	4	piece		
EW05043	25mmØ IMC Locknut and Bushing	4	pair		
EW05053	25mmØ IMC Coupling	4	piece		
EW06	Boxes and Fabricated Pullbox				
EW0603	50mm x 100mm Metal Utility Box	2	piece		
EW0604	100mm x 100mm Metal Junction Box with Cover	4	piece		
EW09	Wires and Cables				
EW0901	THHN Wires				
EW090104b	8.0mm² THHN Wire	50	l.m.		
EW090105b	14.0mm² THHN Wire	100	l.m.		
EW0903	TW Wires				
EW090303b	5.5mm² TW Wire	25	l.m.		
EW090304b	8.0mm² TW Wire	50	l.m.		
EW1303	Enclosed Circuit Breaker (ECB)				
	Main: 50AT, 2P	2	assy		
EW16	Pipe Hangers and Supports				
EW1602	Vertical Layout of Pipe	5	l.m.		
MC	Miscellaneous and Consumables				
MC/G06	Hacksaw Blade	1	piece		
MC/G14	Solvent Cement, 400cc	1	can		
MC/G37	GI Tie Wire, Ga. 16	1	kg		
MC/E01	Electrical Tape	1	piece		
MC/E04	Rubber Tape	1	piece		
			Materials Cost IX-EW		₱
			Labor Cost IX-EW		
			Direct Cost IX-EW		₱
IX-UTI	Utility and Ancillary Works				
SPL2a	Two-Layer Open Line Canal	55	l.m.	₱	₱
CWLC02	Steel Grating	55	l.m.		
	Booster Pumps				
S/PW080506	BP1 -150 GPM, 100 FT. TDH, 7.5 HP, 220V, 1Ø, 60Hz	1	unit		
S/PW080508	BP2 -105 GPM, 90 FT. TDH, 4 HP, 220V, 1Ø, 60Hz	1	unit		
	Pressure Tank				
S/PW080609	PT1 - Stainless steel, Ga #14, 340 Gal Capacity, 20/40 PSI cut-in/cut-off	1	unit		
S/PW080610	PT2 - Stainless steel, Ga #14, 300 Gal Capacity, 20/40 PSI cut-in/cut-off pressure	1	unit		
	Water Tank				

ITEM CODE	WORK DESCRIPTION & SCOPE OF WORKS	QTY.	UNIT	UNIT COST	TOTAL COST
S/PW080903	WT1 - Stainless Steel Construction, 1/4" THK with a Capacity of 2000 gallons, Horizontally Installed	1	unit		
S/PW081103	WT2 - Stainless Steel Construction, 1/4" THK with a Capacity of 1000 gallons, Horizontally Installed	1	unit		
				Materials Cost IX-UTI	₱
				Labor Cost IX-UTI	
				Direct Cost IX-UTI	₱
				MATERIALS COST IX	₱
				LABOR COST IX	
				DIRECT COST IX	₱

ITEM CODE	WORK DESCRIPTION & SCOPE OF WORKS	QTY.	UNIT	UNIT COST	TOTAL COST
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SUMMARY

ITEM CODE	WORK DESCRIPTION AND SCOPE OF WORKS			TOTAL COST
OGR	OTHER GENERAL REQUIREMENTS			₱
	TOTAL ESTIMATED COST A			₱
GR	GENERAL REQUIREMENTS			₱
I	UPGRADING OF MAIN SERVICE ENTRANCE			
II	MATHAY BUILDING			
III	HB BUILDING			
IV	NEW BUILDING			
V	SB 2 BUILDING			
VI	SB 1 BUILDING			
VII	COVERED COURT			
VIII	SIDEWALK			
IX	GROUNDS PLUMBING AND STORM DRAIN SYSTEM			
Note: Strictly enforce health protocol relative to the latest applicable DPWH Memorandum.	TOTAL DIRECT COST B			₱
	Overhead, Contingencies and Miscellaneous Expenses (OCM)			
	PROFIT			
	TOTAL ESTIMATED COST B			₱
	TOTAL DIRECT COST A			₱
	TOTAL ESTIMATED COST B			₱
	TOTAL ESTIMATED COST			₱
	VAT			
	TOTAL APPROVED BUDGET FOR THE CONTRACT			₱

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 guidelines¹ 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.

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]

Omnibus Sworn Statement (Revised)
[shall be submitted with the Bid]

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

AFFIDAVIT

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

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

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

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

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

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

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

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

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

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

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

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

[If a partnership or cooperative:] None of the officers and members of [Name of Bidder] is related to the Head of the Procuring Entity, members of the Bids and Awards Committee (BAC), the Technical Working Group, and the BAC Secretariat, the head of the Project

Management Office or the end-user unit, and the project consultants by consanguinity or affinity up to the third civil degree;

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

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

PHOTOCOPY ADDITIONAL FORMS, IF NECESSARY

Page _____ of _____

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 <u>IN THE CONTRACT</u> <u>SOLE CONTRACTOR / SUB-CONTRACTOR</u> /PARTNER IN A
TOTAL AMOUNT OF CONTRACT (Php)					

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 COMPLETION TIME	TOTAL CONTRACT VALUE AT COMPLETION IF APPLICABLE

PHOTOCOPY ADDITIONAL FORMS, IF NECESSARY

Page _____ of _____

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)

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.

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 VEY 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 said 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

