

**PHILIPPINE BIDDING DOCUMENTS**

**Procurement of  
INFRASTRUCTURE  
PROJECTS**

Government of the Republic of the Philippines

**PROPOSED CONSTRUCTION OF HANDWASHING  
FACILITY AND REHABILITATION OF DAY CARE CENTER  
AT DISTRICT 2 AREA VII (CLUSTER 4)**

**Project number:  
21-00174**

**Sixth Edition  
July 2020**

# Preface

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

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

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

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

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

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

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

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# *Glossary of Terms, Abbreviations, and Acronyms*

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

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

**BAC** – Bids and Awards Committee.

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

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

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

**BIR** – Bureau of Internal Revenue.

**BSP** – Bangko Sentral ng Pilipinas.

**CDA** – Cooperative Development Authority.

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

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

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

**CPI** – Consumer Price Index.

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

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

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

**GFI** – Government Financial Institution.

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

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

**GOP** – Government of the Philippines.

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

**LGUs** – Local Government Units.

**NFCC** – Net Financial Contracting Capacity.

**NGA** – National Government Agency.

**PCAB** – Philippine Contractors Accreditation Board.

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

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

**PSA** – Philippine Statistics Authority.

**SEC** – Securities and Exchange Commission.

**SLCC** – Single Largest Completed Contract.

**UN** – United Nations.



## ***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**



2<sup>nd</sup> floor, Finance Building, Procurement Department, Quezon City Hall Complex, Elliptical Road, Quezon City

November 15, 2021

## Invitation to Bid

| No.                               | Project No. | Project Name  | Location                      | Amount       | Durati on Cal. Days | Office                 | Source Fund            |
|-----------------------------------|-------------|---|-------------------------------|--------------|---------------------|------------------------|------------------------|
| <b><u>Buildings – Small B</u></b> |             |   |                               |              |                     |                        |                        |
| 1                                 | 21-00156    | Proposed Construction of Hand Washing Facility and Rehabilitation of Waterline System at Krus Na Ligas Elementary School (Simon Building)                 | Krus Na Ligas                 | 1,136,052.36 | 60                  | Engineering Department | Special Education Fund |
| 2                                 | 21-00157    | Proposed Construction of Hand Washing Facility at Payatas C Elementary School   | Payatas                       | 1,278,401.32 | 60                  | Engineering Department | Special Education Fund |
| 3                                 | 21-00158    | Proposed Construction of Hand Washing Facility at Main Building of Balara High School   | Pansol                        | 1,282,912.05 | 60                  | Engineering Department | Special Education Fund |
| 4                                 | 21-00159    | Proposed Rehabilitation of Day Care Center at District 3 / Area XIII and XIV  | Claro, Silangan & East Kamias | 1,458,079.64 | 45                  | Engineering Department | Engineering - SB No. 1 |
| 5                                 | 21-00160    | Proposed Construction of Hand Washing Facility and Rehabilitation of Waterline System at Ramon Magsaysay High School Belmonte Building)                   | Pinagkaisahan                 | 1,731,551.85 | 90                  | Engineering Department | Special Education Fund |
| 6                                 | 21-00161    | Proposed Construction of Hand Washing Facility and Rehabilitation of Waterline at Bagong Pag-Asa Elementary School (SB Building)                          | Bagong Pag-Asa                | 1,801,334.79 | 60                  | Engineering Department | Special Education Fund |
| 7                                 | 21-00162    | Proposed Rehabilitation of Milagrosa Daycare Center and Livelihood Center   | Milagrosa                     | 2,198,687.07 | 75                  | Engineering Department | Engineering - SB No. 1 |
| 8                                 | 21-00163    | Proposed Construction of Hand Washing Facility and Rehabilitation of Comfort Rooms and Waterline System at Aguinaldo Elementary School (Estrada Building) | San Roque                     | 2,296,791.86 | 120                 | Engineering Department | Special Education Fund |
| 9                                 | 21-00164    | Proposed Construction of Hand Washing Facility and Rehabilitation of Day Care Center at District 2 Area VII (Cluster 5)                                   | Payatas                       | 2,871,590.18 | 60                  | Engineering Department | Engineering - SB No. 1 |
| 10                                | 21-00165    | Proposed Construction of Hand Washing Facility and Rehabilitation of Day Care Center at District 3 / Area XV  | Matandang Balara & Pansol     | 3,027,863.77 | 60                  | Engineering Department | Engineering - SB No. 1 |

|    |          |   |  |               |    |                        |                        |
|----|----------|---|--|---------------|----|------------------------|------------------------|
| 11 | 21-00166 | Proposed Construction of Hand Washing Facility and Rehabilitation of Comfort Rooms and Waterline System at Maligaya Elementary School (Vargas Building) | Pasong Putik   | 3,565,679.65  | 90 | Engineering Department | Special Education Fund |
| 12 | 21-00167 | Proposed Construction of Hand Washing Facility and Rehabilitation of Comfort Rooms and Waterline System at San Francisco High School (SB Building)      | Ramon Magsaysay  | 4,900,074.64  | 60 | Engineering Department | Special Education Fund |
| 13 | 21-00168 | Proposed Construction of Hand Washing Facility and Rehabilitation of Day Care Center at District 3 / Area XVI and XVIII                                 | Villa Maria Clara, Bagumbuhay, Bayanihan, Escopa 3, Marilag                                      | 5,527,209.52  | 90 | Engineering Department | Engineering - SB No. 1 |
| 14 | 21-00169 | Proposed Construction of Hand Washing Facility and Rehabilitation of Day Care Center at District 4 / Area XIX   | Kamuning, Obrero, Paligsahan, Roxas & South Triangle   | 7,108,186.57  | 60 | Engineering Department | Engineering - SB No. 1 |
| 15 | 21-00170 | Proposed Construction of Hand Washing Facility and Rehabilitation of Day Care Center at District 4 / Area XXIII   | Old Capitol Site, San Vicente & U.P. Campus  | 8,767,692.58  | 90 | Engineering Department | Engineering - SB No. 1 |
| 16 | 21-00171 | Proposed Construction of Hand Washing Facility and Rehabilitation of Day Care Center at District 4 / Area XXIV  | Central, Krus Na Ligas & Pinyahan  | 8,801,647.54  | 60 | Engineering Department | Engineering - SB No. 1 |
| 17 | 21-00172 | Proposed Construction of Hand Washing Facility and Rehabilitation of Day Care Center at District 2 Area VII (Cluster 1)                                 | Bagong Silangan  | 8,899,769.12  | 90 | Engineering Department | Engineering - SB No. 1 |
| 18 | 21-00173 | Proposed Construction of Hand Washing Facility and Rehabilitation of Day Care Center at District 4 / Area XX  | Horseshoe, Immaculate Concepcion, Kaunlaran, Pinagkaisahan & San Martin De Porres                | 9,342,308.35  | 60 | Engineering Department | Engineering - SB No. 1 |
| 19 | 21-00174 | Proposed Construction of Hand Washing Facility and Rehabilitation of Day Care Center at District 2 Area VII (Cluster 4)                                 | Holy Spirit  | 9,513,555.66  | 90 | Engineering Department | Engineering - SB No. 1 |
| 20 | 21-00175 | Proposed Construction of Hand Washing Facility and Rehabilitation of Day Care Center at District 4 / Area XXII  | Tatalon, Don Manuel, Doña Aurora, Doña Imelda, Doña Josefa, San Isidro Galas, Santol & Sto. Niño | 11,988,174.41 | 90 | Engineering Department | Engineering - SB No. 1 |
| 21 | 21-00176 | Proposed Construction of Hand Washing Facility and Rehabilitation of Day Care Center at District 2 Area VII (Cluster 3)                                 | Balonbato & Sangandaan   | 14,755,919.20 | 90 | Engineering Department | Engineering - SB No. 1 |

|    |          |   |               |               |    |                        |                        |
|----|----------|---|---------------|---------------|----|------------------------|------------------------|
| 22 | 21-00177 | Proposed Construction of Hand Washing Facility and Rehabilitation of Day Care Center at District 2 Area VII (Cluster 2) | Batasan Hills | 17,576,527.83 | 90 | Engineering Department | Engineering - SB No. 1 |
|----|----------|---|---------------|---------------|----|------------------------|------------------------|

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 **16 November 2021 (Tuesday)** 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<br>(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 2<sup>nd</sup> Floor, Procurement Department, Finance Building, Quezon City Hall Compound on or before **November 23, 2021 - 5:00PM**.



6. The **QC- BAC- INFRASTRUCTURE & CONSULTANCY** will hold a Pre-Bid Conference<sup>1</sup> on **November 24, 2021 at 10:00 AM at 2<sup>nd</sup> Floor, Procurement Department-Bidding Room, Finance Building, Quezon City Hall Compound** or we encourage the prospective bidders to join through our **Virtual Conference (ZOOM APP)** 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 6, 2021 – 9:00AM**. Late bids shall not be accepted.
8. All bids must be accompanied by a bid security in any of the acceptable forms and in the amount stated in **ITB Clause 16**.
9. Bid opening shall be on **December 6, 2021 - 10:00 AM at 2<sup>nd</sup> 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

2<sup>nd</sup> Floor, Procurement Department,

Finance Building, Quezon City Hall Compound

Elliptical Road, Barangay Central Diliman, Quezon City.

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

Email Add: [bacinfra.procurement@quezoncity.gov.ph](mailto:bacinfra.procurement@quezoncity.gov.ph)

Website: [www.quezoncity.gov.ph](http://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

<sup>1</sup> 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.

## ***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 CONSTRUCTION OF HANDWASHING FACILITY AND REHABILITATION OF DAY CARE CENTER AT DISTRICT 2 AREA VII (CLUSTER 4)**, with Project Identification Number **21-00174**.

*[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 **2021** in the amount of **Nine Million Five Hundred Thirteen Thousand Five Hundred Fifty-Five Pesos & 66/100 Cts. (P 9,513,555.66)**.

2.2. The source of funding is:

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

## 3. Bidding Requirements

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

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

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

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

The Procuring Entity, as well as the Bidders and Contractors, shall observe the highest standard of ethics during the procurement and execution of the contract. They or

through an agent shall not engage in corrupt, fraudulent, collusive, coercive, and obstructive practices defined under Annex “I” of the 2016 revised IRR of RA No. 9184 or other integrity violations in competing for the Project.

## 5. Eligible Bidders

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

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

- 5.3. For Foreign-funded Procurement, the Procuring Entity and the foreign government/foreign or international financing institution may agree on another track record requirement, as specified in the Bidding Document prepared for this purpose.
- 5.4. The Bidders shall comply with the eligibility criteria under Section 23.4.2 of the 2016 IRR of RA No. 9184.

## 6. Origin of Associated Goods

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

## 7. Subcontracts

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

The Procuring Entity has prescribed that:

### a. Subcontracting is not allowed.

- 7.1. *[If Procuring Entity has determined that subcontracting is allowed during the bidding , state:]* The Bidder must submit together with its Bid the documentary requirements of the subcontractor(s) complying with the eligibility criterial stated in **ITB** Clause 5 in accordance with Section 23.4 of the 2016 revised IRR of RA No. 9184 pursuant to Section 23.1 thereof.
- 7.2. *[If subcontracting is allowed during the contract implementation stage, state:]* The Supplier may identify its subcontractor during the contract implementation stage. Subcontractors identified during the bidding may be changed during the



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

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

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

The Procuring Entity will hold a pre-bid conference for this Project on the specified date and time and either at its physical address on **November 24, 2021, 10:00 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        | <b>Subcontracting is not allowed.</b>  |                    |                     |                    |                     |   |                  |         |         |   |   |         |         |   |                |         |         |   |         |         |         |   |                |         |         |   |        |         |         |    |         |        |          |      |               |                    |                     |   |                  |         |         |
| 10.3       | <p><i>No additional contractor license or permit is required</i></p> <p><b><i>In addition, eligible bidders shall qualify or comply with the following:</i></b></p> <p>1. Bidders with valid Philippine Contractors Accreditation Board (PCAB)</p> <p style="padding-left: 40px;">Type</p> <p style="text-align: center;"><b>Building - Small B</b></p>  |                    |                     |                    |                     |   |                  |         |         |   |   |         |         |   |                |         |         |   |         |         |         |   |                |         |         |   |        |         |         |    |         |        |          |      |               |                    |                     |   |                  |         |         |
| 10.4       | <p>The minimum work experience requirements for key personnel are the following:</p> <p style="text-align: center;"><b>PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF BARANGAY COMPLEX DAY CARE CENTER</b></p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Qty.</th> <th style="text-align: center;">Key Personnel</th> <th style="text-align: center;">General Experience</th> <th style="text-align: center;">Relevant Experience</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">1</td> <td>Project Engineer</td> <td style="text-align: center;">3 years</td> <td style="text-align: center;">3 years</td> </tr> <tr> <td style="text-align: center;">1</td> <td>DPWH duly accredited Materials Engineer</td> <td style="text-align: center;">3 years</td> <td style="text-align: center;">3 years</td> </tr> <tr> <td style="text-align: center;">1</td> <td>Safety Officer</td> <td style="text-align: center;">3 years</td> <td style="text-align: center;">3 years</td> </tr> <tr> <td style="text-align: center;">1</td> <td>Foreman</td> <td style="text-align: center;">3 years</td> <td style="text-align: center;">3 years</td> </tr> <tr> <td style="text-align: center;">5</td> <td>Skilled Worker</td> <td style="text-align: center;">3 years</td> <td style="text-align: center;">3 years</td> </tr> <tr> <td style="text-align: center;">1</td> <td>Driver</td> <td style="text-align: center;">3 years</td> <td style="text-align: center;">3 years</td> </tr> <tr> <td style="text-align: center;">11</td> <td>Laborer</td> <td style="text-align: center;">1 year</td> <td style="text-align: center;">3 months</td> </tr> </tbody> </table> <p style="text-align: center;"><b>PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF KALIGTASAN DAY CARE CENTER</b></p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Qty.</th> <th style="text-align: center;">Key Personnel</th> <th style="text-align: center;">General Experience</th> <th style="text-align: center;">Relevant Experience</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">1</td> <td>Project Engineer</td> <td style="text-align: center;">3 years</td> <td style="text-align: center;">3 years</td> </tr> </tbody> </table> | Qty.               | Key Personnel       | General Experience | Relevant Experience | 1 | Project Engineer | 3 years | 3 years | 1 | DPWH duly accredited Materials Engineer | 3 years | 3 years | 1 | Safety Officer | 3 years | 3 years | 1 | Foreman | 3 years | 3 years | 5 | Skilled Worker | 3 years | 3 years | 1 | Driver | 3 years | 3 years | 11 | Laborer | 1 year | 3 months | Qty. | Key Personnel | General Experience | Relevant Experience | 1 | Project Engineer | 3 years | 3 years |
| Qty.       | Key Personnel  | General Experience | Relevant Experience |                    |                     |   |                  |         |         |   |   |         |         |   |                |         |         |   |         |         |         |   |                |         |         |   |        |         |         |    |         |        |          |      |               |                    |                     |   |                  |         |         |
| 1          | Project Engineer   | 3 years            | 3 years             |                    |                     |   |                  |         |         |   |   |         |         |   |                |         |         |   |         |         |         |   |                |         |         |   |        |         |         |    |         |        |          |      |               |                    |                     |   |                  |         |         |
| 1          | DPWH duly accredited Materials Engineer  | 3 years            | 3 years             |                    |                     |   |                  |         |         |   |   |         |         |   |                |         |         |   |         |         |         |   |                |         |         |   |        |         |         |    |         |        |          |      |               |                    |                     |   |                  |         |         |
| 1          | Safety Officer   | 3 years            | 3 years             |                    |                     |   |                  |         |         |   |   |         |         |   |                |         |         |   |         |         |         |   |                |         |         |   |        |         |         |    |         |        |          |      |               |                    |                     |   |                  |         |         |
| 1          | Foreman  | 3 years            | 3 years             |                    |                     |   |                  |         |         |   |   |         |         |   |                |         |         |   |         |         |         |   |                |         |         |   |        |         |         |    |         |        |          |      |               |                    |                     |   |                  |         |         |
| 5          | Skilled Worker   | 3 years            | 3 years             |                    |                     |   |                  |         |         |   |   |         |         |   |                |         |         |   |         |         |         |   |                |         |         |   |        |         |         |    |         |        |          |      |               |                    |                     |   |                  |         |         |
| 1          | Driver   | 3 years            | 3 years             |                    |                     |   |                  |         |         |   |   |         |         |   |                |         |         |   |         |         |         |   |                |         |         |   |        |         |         |    |         |        |          |      |               |                    |                     |   |                  |         |         |
| 11         | Laborer  | 1 year             | 3 months            |                    |                     |   |                  |         |         |   |   |         |         |   |                |         |         |   |         |         |         |   |                |         |         |   |        |         |         |    |         |        |          |      |               |                    |                     |   |                  |         |         |
| Qty.       | Key Personnel  | General Experience | Relevant Experience |                    |                     |   |                  |         |         |   |   |         |         |   |                |         |         |   |         |         |         |   |                |         |         |   |        |         |         |    |         |        |          |      |               |                    |                     |   |                  |         |         |
| 1          | Project Engineer   | 3 years            | 3 years             |                    |                     |   |                  |         |         |   |   |         |         |   |                |         |         |   |         |         |         |   |                |         |         |   |        |         |         |    |         |        |          |      |               |                    |                     |   |                  |         |         |

|   |  |         |          |
|---|--|---------|----------|
| 1 | DPWH duly accredited<br>Materials Engineer | 3 years | 3 years  |
| 1 | Safety Officer                             | 3 years | 3 years  |
| 1 | Foreman                                    | 3 years | 3 years  |
| 6 | Skilled Worker                             | 3 years | 3 years  |
| 1 | Driver                                     | 3 years | 3 years  |
| 9 | Laborer                                    | 1 year  | 3 months |

**PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND  
REHABILITATION OF MAPAYAPA DAY CARE CENTER**

| Qty. | Key Personnel                              | General Experience | Relevant Experience |
|------|--|--------------------|---------------------|
| 1    | Project Engineer                           | 3 years            | 3 years             |
| 1    | DPWH duly accredited<br>Materials Engineer | 3 years            | 3 years             |
| 1    | Safety Officer                             | 3 years            | 3 years             |
| 1    | Foreman                                    | 3 years            | 3 years             |
| 9    | Skilled Worker                             | 3 years            | 3 years             |
| 1    | Driver                                     | 3 years            | 3 years             |
| 5    | Laborer                                    | 1 year             | 3 months            |

**PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND  
REHABILITATION OF ZEBRA DAY CARE CENTER**

| Qty. | Key Personnel                              | General Experience | Relevant Experience |
|------|--|--------------------|---------------------|
| 1    | Project Engineer                           | 3 years            | 3 years             |
| 1    | DPWH duly accredited<br>Materials Engineer | 3 years            | 3 years             |
| 1    | Safety Officer                             | 3 years            | 3 years             |
| 1    | Foreman                                    | 3 years            | 3 years             |
| 8    | Skilled Worker                             | 3 years            | 3 years             |

|   |         |         |          |
|---|---------|---------|----------|
| 1 | Driver  | 3 years | 3 years  |
| 5 | Laborer | 1 year  | 3 months |

**PROPOSED REHABILITATION OF SAINT CATHERINE DAY CARE CENTER**

| Qty. | Key Personnel                           | General Experience | Relevant Experience |
|------|---|--------------------|---------------------|
| 1    | Project Engineer                        | 3 years            | 3 years             |
| 1    | DPWH duly accredited Materials Engineer | 3 years            | 3 years             |
| 1    | Safety Officer                          | 3 years            | 3 years             |
| 1    | Foreman                                 | 3 years            | 3 years             |
| 4    | Skilled Worker                          | 3 years            | 3 years             |
| 1    | Driver                                  | 3 years            | 3 years             |
| 4    | Laborer                                 | 1 year             | 3 months            |

**PROPOSED REHABILITATION OF STO. NIÑO GILARMI DAY CARE CENTER**

| Qty. | Key Personnel                           | General Experience | Relevant Experience |
|------|---|--------------------|---------------------|
| 1    | Project Engineer                        | 3 years            | 3 years             |
| 1    | DPWH duly accredited Materials Engineer | 3 years            | 3 years             |
| 1    | Safety Officer                          | 3 years            | 3 years             |
| 1    | Foreman                                 | 3 years            | 3 years             |
| 4    | Skilled Worker                          | 3 years            | 3 years             |
| 1    | Driver                                  | 3 years            | 3 years             |
| 4    | Laborer                                 | 1 year             | 3 months            |

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



| 10.5        | <p>The minimum major equipment requirements are the following:</p> <p style="text-align: center;"><b>PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF BARANGAY COMPLEX DAY CARE CENTER</b></p> <table border="0" style="width: 100%;"> <thead> <tr> <th style="text-align: left;">Equipment</th> <th style="text-align: left;">Capacity</th> <th style="text-align: left;">Number of Units</th> </tr> </thead> <tbody> <tr> <td>Elf Truck</td> <td></td> <td style="text-align: center;">1</td> </tr> <tr> <td>Scaffolding</td> <td></td> <td style="text-align: center;">as needed</td> </tr> <tr> <td>Power Tools</td> <td></td> <td style="text-align: center;">as needed</td> </tr> <tr> <td>Minor Tools</td> <td></td> <td style="text-align: center;">as needed</td> </tr> </tbody> </table> <p style="text-align: center;"><b>PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF KALIGTASAN DAY CARE CENTER</b></p> <table border="0" style="width: 100%;"> <thead> <tr> <th style="text-align: left;">Equipment</th> <th style="text-align: left;">Capacity</th> <th style="text-align: left;">Number of Units</th> </tr> </thead> <tbody> <tr> <td>Elf Truck</td> <td></td> <td style="text-align: center;">1</td> </tr> <tr> <td>Scaffolding</td> <td></td> <td style="text-align: center;">as needed</td> </tr> <tr> <td>Power Tools</td> <td></td> <td style="text-align: center;">as needed</td> </tr> <tr> <td>Minor Tools</td> <td></td> <td style="text-align: center;">as needed</td> </tr> </tbody> </table> <p style="text-align: center;"><b>PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF MAPAYAPA DAY CARE CENTER</b></p> <table border="0" style="width: 100%;"> <thead> <tr> <th style="text-align: left;">Equipment</th> <th style="text-align: left;">Capacity</th> <th style="text-align: left;">Number of Units</th> </tr> </thead> <tbody> <tr> <td>Elf Truck</td> <td></td> <td style="text-align: center;">1</td> </tr> <tr> <td>Scaffolding</td> <td></td> <td style="text-align: center;">as needed</td> </tr> <tr> <td>Power Tools</td> <td></td> <td style="text-align: center;">as needed</td> </tr> <tr> <td>Minor Tools</td> <td></td> <td style="text-align: center;">as needed</td> </tr> </tbody> </table> <p style="text-align: center;"><b>PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF ZEBRA DAY CARE CENTER</b></p> <table border="0" style="width: 100%;"> <thead> <tr> <th style="text-align: left;">Equipment</th> <th style="text-align: left;">Capacity</th> <th style="text-align: left;">Number of Units</th> </tr> </thead> <tbody> <tr> <td>Elf Truck</td> <td></td> <td style="text-align: center;">1</td> </tr> <tr> <td>Scaffolding</td> <td></td> <td style="text-align: center;">as needed</td> </tr> <tr> <td>Power Tools</td> <td></td> <td style="text-align: center;">as needed</td> </tr> <tr> <td>Minor Tools</td> <td></td> <td style="text-align: center;">as needed</td> </tr> </tbody> </table> | Equipment       | Capacity | Number of Units | Elf Truck |  | 1 | Scaffolding |  | as needed | Power Tools |  | as needed | Minor Tools |  | as needed | Equipment | Capacity | Number of Units | Elf Truck |  | 1 | Scaffolding |  | as needed | Power Tools |  | as needed | Minor Tools |  | as needed | Equipment | Capacity | Number of Units | Elf Truck |  | 1 | Scaffolding |  | as needed | Power Tools |  | as needed | Minor Tools |  | as needed | Equipment | Capacity | Number of Units | Elf Truck |  | 1 | Scaffolding |  | as needed | Power Tools |  | as needed | Minor Tools |  | as needed |
|-------------|---|-----------------|----------|-----------------|-----------|--|---|-------------|--|-----------|-------------|--|-----------|-------------|--|-----------|-----------|----------|-----------------|-----------|--|---|-------------|--|-----------|-------------|--|-----------|-------------|--|-----------|-----------|----------|-----------------|-----------|--|---|-------------|--|-----------|-------------|--|-----------|-------------|--|-----------|-----------|----------|-----------------|-----------|--|---|-------------|--|-----------|-------------|--|-----------|-------------|--|-----------|
| Equipment   | Capacity  | Number of Units |          |                 |           |  |   |             |  |           |             |  |           |             |  |           |           |          |                 |           |  |   |             |  |           |             |  |           |             |  |           |           |          |                 |           |  |   |             |  |           |             |  |           |             |  |           |           |          |                 |           |  |   |             |  |           |             |  |           |             |  |           |
| Elf Truck   |   | 1               |          |                 |           |  |   |             |  |           |             |  |           |             |  |           |           |          |                 |           |  |   |             |  |           |             |  |           |             |  |           |           |          |                 |           |  |   |             |  |           |             |  |           |             |  |           |           |          |                 |           |  |   |             |  |           |             |  |           |             |  |           |
| Scaffolding |   | as needed       |          |                 |           |  |   |             |  |           |             |  |           |             |  |           |           |          |                 |           |  |   |             |  |           |             |  |           |             |  |           |           |          |                 |           |  |   |             |  |           |             |  |           |             |  |           |           |          |                 |           |  |   |             |  |           |             |  |           |             |  |           |
| Power Tools |   | as needed       |          |                 |           |  |   |             |  |           |             |  |           |             |  |           |           |          |                 |           |  |   |             |  |           |             |  |           |             |  |           |           |          |                 |           |  |   |             |  |           |             |  |           |             |  |           |           |          |                 |           |  |   |             |  |           |             |  |           |             |  |           |
| Minor Tools |   | as needed       |          |                 |           |  |   |             |  |           |             |  |           |             |  |           |           |          |                 |           |  |   |             |  |           |             |  |           |             |  |           |           |          |                 |           |  |   |             |  |           |             |  |           |             |  |           |           |          |                 |           |  |   |             |  |           |             |  |           |             |  |           |
| Equipment   | Capacity  | Number of Units |          |                 |           |  |   |             |  |           |             |  |           |             |  |           |           |          |                 |           |  |   |             |  |           |             |  |           |             |  |           |           |          |                 |           |  |   |             |  |           |             |  |           |             |  |           |           |          |                 |           |  |   |             |  |           |             |  |           |             |  |           |
| Elf Truck   |   | 1               |          |                 |           |  |   |             |  |           |             |  |           |             |  |           |           |          |                 |           |  |   |             |  |           |             |  |           |             |  |           |           |          |                 |           |  |   |             |  |           |             |  |           |             |  |           |           |          |                 |           |  |   |             |  |           |             |  |           |             |  |           |
| Scaffolding |   | as needed       |          |                 |           |  |   |             |  |           |             |  |           |             |  |           |           |          |                 |           |  |   |             |  |           |             |  |           |             |  |           |           |          |                 |           |  |   |             |  |           |             |  |           |             |  |           |           |          |                 |           |  |   |             |  |           |             |  |           |             |  |           |
| Power Tools |   | as needed       |          |                 |           |  |   |             |  |           |             |  |           |             |  |           |           |          |                 |           |  |   |             |  |           |             |  |           |             |  |           |           |          |                 |           |  |   |             |  |           |             |  |           |             |  |           |           |          |                 |           |  |   |             |  |           |             |  |           |             |  |           |
| Minor Tools |   | as needed       |          |                 |           |  |   |             |  |           |             |  |           |             |  |           |           |          |                 |           |  |   |             |  |           |             |  |           |             |  |           |           |          |                 |           |  |   |             |  |           |             |  |           |             |  |           |           |          |                 |           |  |   |             |  |           |             |  |           |             |  |           |
| Equipment   | Capacity  | Number of Units |          |                 |           |  |   |             |  |           |             |  |           |             |  |           |           |          |                 |           |  |   |             |  |           |             |  |           |             |  |           |           |          |                 |           |  |   |             |  |           |             |  |           |             |  |           |           |          |                 |           |  |   |             |  |           |             |  |           |             |  |           |
| Elf Truck   |   | 1               |          |                 |           |  |   |             |  |           |             |  |           |             |  |           |           |          |                 |           |  |   |             |  |           |             |  |           |             |  |           |           |          |                 |           |  |   |             |  |           |             |  |           |             |  |           |           |          |                 |           |  |   |             |  |           |             |  |           |             |  |           |
| Scaffolding |   | as needed       |          |                 |           |  |   |             |  |           |             |  |           |             |  |           |           |          |                 |           |  |   |             |  |           |             |  |           |             |  |           |           |          |                 |           |  |   |             |  |           |             |  |           |             |  |           |           |          |                 |           |  |   |             |  |           |             |  |           |             |  |           |
| Power Tools |   | as needed       |          |                 |           |  |   |             |  |           |             |  |           |             |  |           |           |          |                 |           |  |   |             |  |           |             |  |           |             |  |           |           |          |                 |           |  |   |             |  |           |             |  |           |             |  |           |           |          |                 |           |  |   |             |  |           |             |  |           |             |  |           |
| Minor Tools |   | as needed       |          |                 |           |  |   |             |  |           |             |  |           |             |  |           |           |          |                 |           |  |   |             |  |           |             |  |           |             |  |           |           |          |                 |           |  |   |             |  |           |             |  |           |             |  |           |           |          |                 |           |  |   |             |  |           |             |  |           |             |  |           |
| Equipment   | Capacity  | Number of Units |          |                 |           |  |   |             |  |           |             |  |           |             |  |           |           |          |                 |           |  |   |             |  |           |             |  |           |             |  |           |           |          |                 |           |  |   |             |  |           |             |  |           |             |  |           |           |          |                 |           |  |   |             |  |           |             |  |           |             |  |           |
| Elf Truck   |   | 1               |          |                 |           |  |   |             |  |           |             |  |           |             |  |           |           |          |                 |           |  |   |             |  |           |             |  |           |             |  |           |           |          |                 |           |  |   |             |  |           |             |  |           |             |  |           |           |          |                 |           |  |   |             |  |           |             |  |           |             |  |           |
| Scaffolding |   | as needed       |          |                 |           |  |   |             |  |           |             |  |           |             |  |           |           |          |                 |           |  |   |             |  |           |             |  |           |             |  |           |           |          |                 |           |  |   |             |  |           |             |  |           |             |  |           |           |          |                 |           |  |   |             |  |           |             |  |           |             |  |           |
| Power Tools |   | as needed       |          |                 |           |  |   |             |  |           |             |  |           |             |  |           |           |          |                 |           |  |   |             |  |           |             |  |           |             |  |           |           |          |                 |           |  |   |             |  |           |             |  |           |             |  |           |           |          |                 |           |  |   |             |  |           |             |  |           |             |  |           |
| Minor Tools |   | as needed       |          |                 |           |  |   |             |  |           |             |  |           |             |  |           |           |          |                 |           |  |   |             |  |           |             |  |           |             |  |           |           |          |                 |           |  |   |             |  |           |             |  |           |             |  |           |           |          |                 |           |  |   |             |  |           |             |  |           |             |  |           |

|             | <p style="text-align: center;"><b>PROPOSED REHABILITATION OF SAINT CATHERINE DAY CARE CENTER</b></p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%;">Equipment</th> <th style="width: 30%;">Capacity</th> <th style="width: 20%;">Number of Units</th> </tr> </thead> <tbody> <tr> <td>Elf Truck</td> <td></td> <td style="text-align: center;">1</td> </tr> <tr> <td>Scaffolding</td> <td></td> <td style="text-align: center;">as needed</td> </tr> <tr> <td>Power Tools</td> <td></td> <td style="text-align: center;">as needed</td> </tr> <tr> <td>Minor Tools</td> <td></td> <td style="text-align: center;">as needed</td> </tr> </tbody> </table> <p style="text-align: center;"><b>PROPOSED REHABILITATION OF STO. NIÑO GILARMI DAY CARE CENTER</b></p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%;">Equipment</th> <th style="width: 30%;">Capacity</th> <th style="width: 20%;">Number of Units</th> </tr> </thead> <tbody> <tr> <td>Elf Truck</td> <td></td> <td style="text-align: center;">1</td> </tr> <tr> <td>Scaffolding</td> <td></td> <td style="text-align: center;">as needed</td> </tr> <tr> <td>Power Tools</td> <td></td> <td style="text-align: center;">as needed</td> </tr> <tr> <td>Minor Tools</td> <td></td> <td style="text-align: center;">as needed</td> </tr> </tbody> </table> <p><i>In addition, the bidder must execute an affidavit of undertaking duly notarized stating that the foregoing equipment shall be used exclusively for the project until its completion. Please see attached bid forms.</i></p> | Equipment       | Capacity | Number of Units | Elf Truck |  | 1 | Scaffolding |  | as needed | Power Tools |  | as needed | Minor Tools |  | as needed | Equipment | Capacity | Number of Units | Elf Truck |  | 1 | Scaffolding |  | as needed | Power Tools |  | as needed | Minor Tools |  | as needed |
|-------------|---|-----------------|----------|-----------------|-----------|--|---|-------------|--|-----------|-------------|--|-----------|-------------|--|-----------|-----------|----------|-----------------|-----------|--|---|-------------|--|-----------|-------------|--|-----------|-------------|--|-----------|
| Equipment   | Capacity  | Number of Units |          |                 |           |  |   |             |  |           |             |  |           |             |  |           |           |          |                 |           |  |   |             |  |           |             |  |           |             |  |           |
| Elf Truck   |   | 1               |          |                 |           |  |   |             |  |           |             |  |           |             |  |           |           |          |                 |           |  |   |             |  |           |             |  |           |             |  |           |
| Scaffolding |   | as needed       |          |                 |           |  |   |             |  |           |             |  |           |             |  |           |           |          |                 |           |  |   |             |  |           |             |  |           |             |  |           |
| Power Tools |   | as needed       |          |                 |           |  |   |             |  |           |             |  |           |             |  |           |           |          |                 |           |  |   |             |  |           |             |  |           |             |  |           |
| Minor Tools |   | as needed       |          |                 |           |  |   |             |  |           |             |  |           |             |  |           |           |          |                 |           |  |   |             |  |           |             |  |           |             |  |           |
| Equipment   | Capacity  | Number of Units |          |                 |           |  |   |             |  |           |             |  |           |             |  |           |           |          |                 |           |  |   |             |  |           |             |  |           |             |  |           |
| Elf Truck   |   | 1               |          |                 |           |  |   |             |  |           |             |  |           |             |  |           |           |          |                 |           |  |   |             |  |           |             |  |           |             |  |           |
| Scaffolding |   | as needed       |          |                 |           |  |   |             |  |           |             |  |           |             |  |           |           |          |                 |           |  |   |             |  |           |             |  |           |             |  |           |
| Power Tools |   | as needed       |          |                 |           |  |   |             |  |           |             |  |           |             |  |           |           |          |                 |           |  |   |             |  |           |             |  |           |             |  |           |
| Minor Tools |   | as needed       |          |                 |           |  |   |             |  |           |             |  |           |             |  |           |           |          |                 |           |  |   |             |  |           |             |  |           |             |  |           |
| 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"> <li>a) The amount of not less than Php 190,271.11 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</li> <li>b) The amount of not less than Php 475,677.78 or equivalent to five percent (5%) of ABC if bid security is in Surety Bond.</li> </ul>   |                 |          |                 |           |  |   |             |  |           |             |  |           |             |  |           |           |          |                 |           |  |   |             |  |           |             |  |           |             |  |           |
| 19.2        | <b>Partial bid is not allowed.</b> 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><b>Additional Contract Documents relevant to the Project as required:</b></p> <ol style="list-style-type: none"> <li><b>1. Construction Schedule and S-curve,</b></li> <li><b>2. Manpower Schedule,</b></li> <li><b>3. Construction Methods,</b></li> <li><b>4. Equipment Utilization Schedule,</b></li> <li><b>5. PERT/CPM or other acceptable tools of project scheduling, shall be included in the submission of Technical Proposal.</b></li> </ol>   |                 |          |                 |           |  |   |             |  |           |             |  |           |             |  |           |           |          |                 |           |  |   |             |  |           |             |  |           |             |  |           |

## ***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 90 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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Dorotan, Central 1100 Quezon City  
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### TECHNICAL SPECIFICATIONS QUEZON CITY INFRASTRUCTURE PROJECT

**PROJECT TITLE: PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF BARANGAY COMPLEX DAY CARE CENTER**

**LOCATION: BARANGAY HOLY SPIRIT, DISTRICT 2, QUEZON CITY**

#### I. 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 not anymore required within the construction site including the disassembly, removal and site clean-up of offices and other facilities assembled on the site specifically for this contract.

2. 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

## II. SITE WORKS

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

### III. CIVIL / STRUCTURAL WORKS

#### A. 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 whatever necessary to confine the concrete and shape it to the required lines, or to insure the concrete of contamination with materials caving from adjacent, excavated surfaces. Forms shall have sufficient strength to withstand the pressure resulting from placement and vibration of the concrete, and shall be maintained rigidly in correct position. Forms shall be sufficiently tight to prevent loss of mortar from the concrete. Forms shall be ¼" waterproof plywood and form lumber.
  - ii. Cleaning of Forms - before placing the concrete, the contact surfaces of the formed shall be cleaned of encrustations of mortar, the grout or other foreign material.

- li. **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 curing 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 embedded items, or elsewhere as directed, the discharge shall be so controlled that the concrete may be effectively compacted into horizontal layers not exceeding 30 centimeters in depth within the maximum lateral movement specified.
- 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 embedded in concrete beginning to set or already set shall not be disturbed by vibrators. Consolidation around major embedded 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.

## **B. MASONRY**

- a. **Masonry Units (CMB).**
  - i. 100mm thick for all interior walls and exterior walls unless otherwise indicated.
  - ii. Use 400 psi for non-load bearing blocks and 700 psi for load bearing blocks where required.
  - iii. 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 & lintel beams as specified in the structural drawings or as specified or as deemed required to assure a stabilized wall due to height & other considerations.
- b. **Sand:**

S-1, washed, clean and greenish in color.
- c. **Mortar:**

One part 'Portland' cement and two parts sand and water but not more than three parts sand and water.
- d. **Plaster bond.**

Apply plaster bond to all wall area

## **IV. ARCHITECTURAL WORKS**

### **A. TILE WORKS**

- a. Both broken and unbroken old tiles must be chip-off
- b. Surface should be smoothen & clean
- c. Homogeneous tiles shall be soaked in clean water prior to installation.
- d. Lay the tiles true to profile as specified in the plan

### **B. FABRICATED DOORS**

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

### **C. PAINTING WORKS**

- a. All primers, thinners and putty, also waterproofing for internal and external application shall be the same brand as the specified material.
- b. Application shall be as per paint Manufacturer's specification and recommendation.
- c. Provide all drop cloth and other covering requisite for protection of floors, walls, aluminum, glass, finishes and other works.
- d. All applications and methods used shall strictly follow the Manufacturer's Instructions and Specifications.
- e. All surfaces including masonry wall shall be thoroughly cleaned, puttied, sandpapered, rubbed and polished; masonry wall shall be treated with Neutralizer.



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

## V. SANITARY / PLUMBING WORKS

- A. Comply with the current applicable codes, ordinances, and regulations of the authority or authorities having jurisdiction, the rules, regulations and requirements of the utility companies (as applicable)
- B. Supply, installation and testing of the following:
  - 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 3m. of water higher than the test section and wait for 15 min, then check for leakage at every joints.
- V. Testing of drainage systems shall be carried out in sections by dividing the system horizontally. Each section shall comprise pipework and fitting for three floors/storeys required for testing.
- W. Drainage pressure pipe shall be hydraulic tested at minimum pressure 50 psi.
- X. Hangers and supports for plumbing piping and equipment shall withstand the effects of gravity loads and stresses within limits and under conditions indicated according to ASCE/SEI 7.
- Y. Install hangers and supports to allow controlled thermal and seismic movement of piping systems, to permit freedom of movement between pipe anchors, and to facilitate action of expansion joints, expansion loops, expansion bends, and similar units.
- Z. Install lateral bracing with pipe hangers and supports to prevent swaying.
- AA. Install building attachments within concrete slabs or attach to structural steel. Install additional attachments at concentrated loads, including valves, flanges, and strainers NPS 2-1/2 (DN 65) and larger and at changes in direction of piping. Install concrete inserts before concrete is placed; fasten inserts to forms and install reinforcing bars through openings at top of inserts.
- BB. Install hangers and supports so that piping live and dead loads and stresses from movement will not be transmitted to connected equipment.
- CC. Install hangers and supports to provide indicated pipe slopes and to not exceed maximum pipe deflections allowed by ASME B31.9 for building services piping.

## VI. ELECTRICAL WORKS

- A. 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. Drawings, specifications, codes and standards are minimum requirements. Where requirements differ, the more stringent apply.
- C. All equipment and installations shall meet or exceed minimum requirements of the Standards and Codes.
- D. Execute work in strict accordance with the best practices of the trades in a thorough, substantial, workmanlike manner by competent workmen.
- E. 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.

### F. PANELBOARDS

- F.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.
- F.2 Enclosures: Flush, Surface, Flush- and surface-mounted cabinets.
  - F.2.1 Rated for environmental conditions at installed location.
    - i. Indoor Dry and Clean Locations: NEMA 250, Type 1.
    - ii. Outdoor Locations: NEMA 250, Type 3R.
    - iii. Kitchen and Wash-Down Areas: NEMA 250, Type 4X, stainless steel.
    - iv. Other Wet or Damp Indoor Locations: NEMA 250, Type 4.
    - v. Indoor Locations Subject to Dust, Falling Dirt, and Dripping Noncorrosive Liquids: NEMA 250, Type 5 or Type 12.
  - F.2.2 Front: Secured to box with concealed trim clamps. For surface-mounted fronts, match box dimensions; for flush-mounted fronts, overlap box.
  - F.2.3 Hinged Front Cover: Entire front trim hinged to box and with standard door within hinged trim cover.
  - F.2.4 Skirt for Surface-Mounted Panelboards: Same gage and finish as panelboard front with flanges for attachment to panelboard, wall, and ceiling or floor.
  - F.2.5 Gutter Extension and Bumper: Same gage and finish as panelboard enclosure, integral with enclosure body. Arrange to isolate individual panel sections.
  - F.2.6 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.

- in. Fungus Proofing: Permanent fungicidal treatment for overcurrent protective devices and other components.
- F.2.7 Directory Card: Inside panelboard door, mounted in transparent card holder metal frame with transparent protective cover.
- F.3 Incoming Mains Location: Top or Bottom.
- F.4 Phase, Neutral, and Ground Buses:
- F.4.1 Material: Hard-drawn copper; 99 percent conductivity.
  - F.4.2 Equipment Ground Bus: Adequate for feeder and branch-circuit equipment grounding conductors; bonded to box
  - F.4.3 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.



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Planning and Programming Division



JOCELYN A. NAONG

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*Republic of the Philippines*  
*Quezon City*  
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**TECHNICAL SPECIFICATIONS**  
**QUEZON CITY INFRASTRUCTURE PROJECT**

**PROJECT TITLE: PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF KALIGTASAN DAY CARE CENTER**

**LOCATION: BARANGAY HOLY SPIRIT, DISTRICT 2, QUEZON CITY**

**I. 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 not anymore required within the construction site including the disassembly, removal and site clean-up of offices and other facilities assembled on the site specifically for this contract.

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

## II. SITE WORKS

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

### III. CIVIL / STRUCTURAL WORKS

#### A. 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.
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  - 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 ¼" waterproof plywood and form lumber.
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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

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- 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 or 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.

## B. 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 E70xx 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.

## C. ROOFING WORKS

- a. The roof shall be covered with Ga. 24 pre-painted G.I. rib-type roofing sheets as shown on the plans. The roofing shall be secured to the purlins with min. 2 1/4" max. 3" long Tek screws. 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.

- b. All roofing sheets adjacent to concrete hollow block and other masonry walls such as property 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.

#### IV. ARCHITECTURAL WORKS

##### A. TILE WORKS

- a. Both broken and unbroken old tiles must be chip-off
- b. Surface should be smoothen & clean
- c. Homogeneous tiles shall be soaked in clean water prior to installation
- d. Lay the tiles true to profile as specified in the plan.

##### B. PROVISION OF CABINET

- a. Good Lumber must be 2' x 2' x 10' for support frames and main frames.
- b. 1/2" thick Plywood must be used.
- c. Countertop must be finished with 300mm x 300mm Tiles.

##### C. FABRICATED DOORS & WINDOWS

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

##### D. PAINTING WORKS

- a. All primers, thinners and putty, also waterproofing for internal and external application shall be the same brand as the specified material
- b. Application shall be as per paint Manufacturer's specification and recommendation.
- c. Provide all drop cloth and other covering requisite for protection of floors, walls, aluminum, glass, finishes and other works.
- d. All applications and methods used shall strictly follow the Manufacturer's Instructions and Specifications
- e. All surfaces including masonry wall shall be thoroughly cleaned, puttied, sandpapered, rubbed and polished; masonry wall shall be treated with Neutralizer.
- f. 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.
- g. All other surfaces endangered by stains and paint marks should be taped and covered with craft paper.

#### V. SANITARY / PLUMBING WORKS

- A. Comply with the current applicable codes, ordinances, and regulations of the authority or authorities having jurisdiction, the rules, regulations and requirements of the utility companies (as applicable)
- B. Supply, installation and testing of the following:
  - 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 3m. of water higher than the test section and wait for 15 min, then check for leakage at every joints.
- V. Testing of drainage systems shall be carried out in sections by dividing the system horizontally. Each section shall comprise pipework and fitting for three floors/storeys required for testing.
- W Drainage pressure pipe shall be hydraulic tested at minimum pressure 50 psi.
- X. Hangers and supports for plumbing piping and equipment shall withstand the effects of gravity loads and stresses within limits and under conditions indicated according to ASCE/SEI 7.
- Y. Install hangers and supports to allow controlled thermal and seismic movement of piping systems, to permit freedom of movement between pipe anchors, and to facilitate action of expansion joints, expansion loops, expansion bends, and similar units.
- Z. Install lateral bracing with pipe hangers and supports to prevent swaying.
- AA Install building attachments within concrete slabs or attach to structural steel. Install additional attachments at concentrated loads, including valves, flanges, and strainers. NPS 2-1/2 (DN 65) and larger and at changes in direction of piping. Install concrete inserts before concrete is placed, fasten inserts to forms and install reinforcing bars through openings at top of inserts.
- BB Install hangers and supports so that piping live and dead loads and stresses from movement will not be transmitted to connected equipment.
- CC. Install hangers and supports to provide indicated pipe slopes and to not exceed maximum pipe deflections allowed by ASME B31.9 for building services piping.

## VI ELECTRICAL WORKS

- A. 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. Drawings, specifications, codes and standards are minimum requirements. Where requirements differ, the more stringent apply.
- C. All equipment and installations shall meet or exceed minimum requirements of the Standards and Codes.
- D. Execute work in strict accordance with the best practices of the trades in a thorough, substantial, workmanlike manner by competent workmen.
- E. 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.
- F. PANELBOARDS
  - F.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.
  - F.2 Enclosures: Flush, Surface, Flush- and surface-mounted cabinets.
    - F.2.1 Rated for environmental conditions at installed location.

- i. Indoor Dry and Clean Locations: NEMA 250, Type 1.
  - ii. Outdoor Locations: NEMA 250, Type 3R.
  - iii. Kitchen and Wash-Down Areas: NEMA 250, Type 4X, stainless steel.
  - iv. Other Wet or Damp Indoor Locations: NEMA 250, Type 4.
  - v. Indoor Locations Subject to Dust, Falling Dirt, and Dripping Noncorrosive Liquids: NEMA 250, Type 5 or Type 12.
- F.2.2 Front: Secured to box with concealed trim clamps. For surface-mounted fronts, match box dimensions; for flush-mounted fronts, overlap box.
- F.2.3 Hinged Front Cover: Entire front trim hinged to box and with standard door within hinged trim cover
- F.2.4 Skirt for Surface-Mounted Panelboards: Same gage and finish as panelboard front with flanges for attachment to panelboard, wall, and ceiling or floor
- F.2.5 Gutter Extension and Barrier: Same gage and finish as panelboard enclosure; integral with enclosure body. Arrange to isolate individual panel sections.
- F.2.6 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.
- F.2.7 Directory Card: Inside panelboard door, mounted in transparent card holder metal frame with transparent protective cover.
- F.3 Incoming Mains Location: Top or Bottom.
- F.4 Phase, Neutral, and Ground Buses:
- F.4.1 Material: Hard-drawn copper, 98 percent conductivity
  - F.4.2 Equipment Ground Bus: Adequate for feeder and branch-circuit equipment grounding conductors; bonded to box
  - F.4.3 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.

  
AERON JAREN T. REMILLETE

Planning and Programming Division

  
JOCELYN A. MAONG

 Planning and Programming Division



*Republic of the Philippines*  
*Quezon City*

## **CITY ENGINEERING DEPARTMENT**

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### **TECHNICAL SPECIFICATIONS** **QUEZON CITY INFRASTRUCTURE PROJECT**

**PROJECT TITLE: PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF MAPAYAPA DAY CARE CENTER**

**LOCATION: BARANGAY HOLY SPIRIT, DISTRICT 2, QUEZON CITY**

#### **I. 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 not anymore required within the construction site including the disassembly, removal and site clean-up of offices and other facilities assembled on the site specifically for this contract.

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

## II. SITE WORKS

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

### III. CIVIL / STRUCTURAL WORKS

#### A. 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 particles 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 wherever necessary to confine the concrete and shape it to the required lines, or to insure the concrete of continuation 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 ¾" waterproof plywood and form lumber.
  - ii. **Cleaning of Forms** - before placing the concrete, the contact surfaces of the formed shall be cleaned of encrustations of mortar, the grout or other foreign material.



- bi 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 embedded items, or elsewhere as directed, the discharge shall be so controlled that the concrete may be effectively compacted into horizontal layers not exceeding 30 centimeters in depth within the maximum lateral movement specified.
- 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 embedded in concrete beginning to set or already set shall not be disturbed by vibrators. Consolidation around major embedded parts shall by hand spading and tamping and vibrators shall not be used.
- 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 ratio 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

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

## B. MASONRY

- a. Masonry Units (CHB):
  - i. 100mm thick for all interior walls and exterior walls unless otherwise indicated
  - ii. Use 400 psi for non-load bearing blocks and 700 psi for load bearing blocks where required.
  - iii. 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 & lintel beams as specified in the structural drawings or as specified or as deemed required to assure a stabilized wall due to height & other considerations.
- b. Sand:
 

S-1, washed, clean and greenish in color.
- c. Mortar:
 

One part "Portland" cement and two parts sand and water but not more than three parts sand and water.
- d. Plaster bond:
 

Apply plaster bond to all wall area

## C. ROOFING WORKS

- a. The roof shall be covered with Ga. 24 pre-painted G.I. rib-type roofing sheets as shown on the plans. The roofing shall be secured to the purlins with min. 2 1/2" max 3" long Tek screws. 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.
- b. All roofing sheets adjacent to concrete hollow block and other masonry walls such as property 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.

## D. WATERPROOFING

- a. Waterproofing
 

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
- b. Testing
 

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

Note: Thickness should be as per Manufacturers Specifications and Installation depending on the Areas to be applied with.

#### IV. ARCHITECTURAL WORKS

##### A. TILE WORKS

- a. Both broken and unbroken old tiles must be chip-off
- b. Surface should be smoothen & clean.
- c. Homogenous tiles shall be soaked in clean water prior to installation
- d. Lay the tiles true to profile as specified in the plan.

##### B. PROVISION OF CABINET

- a. Good Lumber must be 2" x 2" x 10' for support frames and main frames.
- b. 1/2" thick Plywood must be used.
- c. Countertop must be finished with 300mm x 300mm Tiles.

##### C. FABRICATED DOORS & WINDOWS

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

##### D. PAINTING WORKS

- a. All primers, thinners and putty, also waterproofing for internal and external application shall be the same brand as the specified material.
- b. Application shall be as per paint Manufacturer's specification and recommendation
- c. Provide all drop cloth and other covering requisite for protection of floors, walls, aluminum, glass, finishes and other works.
- d. All applications and methods used shall strictly follow the Manufacturer's Instructions and Specifications
- e. All surfaces including masonry wall shall be thoroughly cleaned, putted, sandpapered, rubbed and polished, masonry wall shall be treated with Neutralizer.
- f. 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.
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  - 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.
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- F.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.
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  - F.2.1 Rated for environmental conditions at installed location.
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    - iv. Other Wet or Damp Indoor Locations: NEMA 250, Type 4.
    - v. Indoor Locations Subject to Dust, Falling Dirt, and Dripping Noncorrosive Liquids: NEMA 250, Type 5 or Type 12.
  - F.2.2 Front: Secured to box with concealed trim clamps. For surface-mounted fronts, match box dimensions; for flush-mounted fronts, overlap box.
  - F.2.3 Hinged Front Cover: Entire front trim hinged to box and with standard door within hinged trim cover.
  - F.2.4 Skirt for Surface-Mounted Panelboards: Same gage and finish as panelboard front with flanges for attachment to panelboard, wall, and ceiling or floor.
  - F.2.5 Gutter Extension and Barrier: Same gage and finish as panelboard enclosure, integral with enclosure body. Arrange to isolate individual panel sections.
  - F.2.6 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.
  - F.2.7 Directory Card: Inside panelboard door, mounted in transparent card holder metal frame with transparent protective cover.
- F.3 Incoming Mains Location: Top or Bottom.
- F.4 Phase, Neutral, and Ground Buses:

- F.4.1 Material: Hard-drawn copper, 98 percent conductivity
- F.4.2 Equipment Ground Bus: Adequate for feeder and branch-circuit equipment grounding conductors, bonded to box.
- F.4.3 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.



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## **CITY ENGINEERING DEPARTMENT**

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### **TECHNICAL SPECIFICATIONS** **QUEZON CITY INFRASTRUCTURE PROJECT**

**PROJECT TITLE: PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF ZEBRA DAY CARE CENTER**

**LOCATION: BARANGAY HOLY SPIRIT, DISTRICT 2, QUEZON CITY**

#### **I. 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 not anymore required within the construction site including the disassembly, removal and site clean-up of offices and other facilities assembled on the site specifically for this contract.



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

## II. SITE WORKS

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

## III. CIVIL / STRUCTURAL WORKS

### A. 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 silt, 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 whatever necessary to confine the concrete and shape it to the required lines, or to insure the concrete of contamination with materials caving from adjacent, excavated surfaces. Forms shall have sufficient strength to withstand the pressure resulting from placement and vibration of the concrete, and shall be maintained rigidly in correct position. Forms shall be sufficiently tight to prevent loss of mortar from the concrete. Forms shall be ¾ waterproof plywood and form lumber.
  - ii. Cleaning of Forms - before placing the concrete, the contact surfaces of the formed 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 embedded items, or elsewhere as directed. the discharge shall be so controlled that the concrete may be effectively compacted into horizontal layers not exceeding 30 centimeters in depth within the maximum lateral movement specified.
- 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 80 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 embedded in concrete beginning to set or already set shall not be disturbed by vibrators. Consolidation around major embedded parts shall by hand spading and tamping and vibrators shall not be used.
- 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 overlying slab except when indicated.

## B. MASONRY

### a. Masonry Units (CHB):

- i. 100mm thick for all interior walls and exterior walls unless otherwise indicated.
- ii. Use 400 psi for non-load bearing blocks and 700 psi for load bearing blocks where required.
- iii. 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 & lintel beams as specified in the structural drawings or as specified or as deemed required to assure a stabilized wall due to height & other considerations.

### b. Sand:

S-1, washed, clean and greenish in color.

### c. Mortar:

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

### d. Plaster bond:

Apply plaster bond to all wall area

## C. ROOFING WORKS

- a. The roof shall be covered with Ga. 24 pre-painted G.I. rib-type roofing sheets as shown on the plans. The roofing shall be secured to the purlins with min. 2 1/2" max. 3" long Tek screws. 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
- b. The roof 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 1/2" max. 3" long Tek screws. 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.
- c. All roofing sheets adjacent to concrete hollow block and other masonry walls such as property 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.

**D. WATERPROOFING****a. Waterproofing:**

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.

**b. Testing:**

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

Note: Thickness should be as per Manufacturers Specifications and Installation depending on the Areas to be applied with.

**IV. ARCHITECTURAL WORKS****A. TILE WORKS**

- a. Both broken and unbroken old tiles must be chip-off
- b. Surface should be smoothen & clean.
- c. Ceramic tiles shall be soaked in clean water prior to installation.
- d. Lay the tiles true to profile as specified in the plan.

**B. PROVISION OF CABINET**

- a. Good Lumber must be 2' x 2" x 10' for support frames and main frames.
- b. 1/2" thick Plywood must be used.
- c. Countertop must be finished with 300mm x 300mm Tiles.

**C. FABRICATED DOORS & WINDOWS**

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

**D. PAINTING WORKS**

- a. All primers, thinners and putty, also waterproofing for internal and external application shall be the same brand as the specified material
- b. Application shall be as per paint Manufacturer's specification and recommendation.
- c. Provide all drop cloth and other covering requisite for protection of floors, walls, aluminum, glass, finishes and other works.
- d. All applications and methods used shall strictly follow the Manufacturer's Instructions and Specifications.
- e. All surfaces including masonry wall shall be thoroughly cleaned, puffed, sandpapered, rubbed and polished, masonry wall shall be treated with Neutralizer
- f. 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
- g. All other surfaces endangered by stains and paint marks should be taped and covered with craft paper.

## V. SANITARY / PLUMBING WORKS

- A. Comply with the current applicable codes, ordinances, and regulations of the authority or authorities having jurisdiction, the rules, regulations and requirements of the utility companies (as applicable).
- B. Supply, installation and testing of the following:
  - 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 manufacturer's written recommendations.
- F. Physical sizes of all plant and equipment are to be suitable for the space allocated for the accommodation of such plant and equipment taking into account the requirement of access for maintenance purposes.
- G. In selecting makes and types of equipment, the Contractor shall ascertain that facilities for proper maintenance, repair and replacement are provided.
- H. Where the Contractor proposes to use an item of equipment other than that specified or detailed in the drawing, which requires any redesign of the system, drawings showing the layout of the equipment and such redesign as required therefore shall be prepared by the Contractor at his own expenses. Where such approved deviation necessitates a different quantity and arrangement of materials and equipment's from that originally specified or indicated in the drawings, the Contractor shall furnish and install any such additional materials and equipment's required by the system at no additional cost.
- I. Equipment catalogue and manufacturer's specifications must be submitted for examination and details shall be submitted for approval before any equipment is to be ordered.
- J. This shall include all information necessary to ascertain the equipment comply with this specification and drawings. Data and sales catalogue of a general nature will not be accepted.
- K. All materials, equipment, components and accessories shall be delivered to the Site in a new condition, properly packed and protected against damage or contamination or distortion, breakage or structural weakening due to handling, adverse weather or other circumstances and, as far as practicable, they shall be kept in the packing cases or under approved protective coverings until required for use.
- L. Any items suffering from damage during manufacture, or in transit, or on site whilst in storage or during erection shall be rejected and replaced without extra cost.
- M. All sanitary fittings and pipework shall be cleaned after installation and keep them in a new condition.

- N. All installed pipelines shall be flushed through with water, rodded when necessary to ensure clearance of debris.
- O. Cleaning and flushing shall be carried out in sections as the installation becomes completed
- P. The Contractor shall carry out hydraulic test on the complete plumbing systems and the drainage system to show that it is functioning satisfactorily within the requirements of this Specification and local regulations.
- Q. The Contractor shall provide suitable test pumps and arrange for a supply of water required in connection with testing of pipework. The test pump shall be fitted with pressure gauges which shall be of suitable range for the pressure being applied.
- R. Hydraulic tests shall be carried out as the pipework is installed and shall be completed before chases in walls and ducts are closed. Also test shall be carried out prior to false ceilings and other finishes are installed.
- S. Testing apparatus shall be provided by the Contractor. Where any section of pipework or equipment is unable to withstand the maximum pipework test pressure, it shall be isolated during the pipework test then that section of pipework or equipment shall be re-tested at the appropriate test pressure.
- T. The Sanitary Contractor must carry out any additional tests required by the end-user and/or approving agency.
- U. Drainage pipe shall be tested by filling the pipe with 3m. of water higher than the test section and wait for 15 min. then check for leakage at every joints.
- V. Testing of drainage systems shall be carried out in sections by dividing the system horizontally. Each section shall comprise pipework and fitting for three floors/storeys required for testing.
- W. Drainage pressure pipe shall be hydraulic tested at minimum pressure 50 psi
- X. Hangers and supports for plumbing piping and equipment shall withstand the effects of gravity loads and stresses within limits and under conditions indicated according to ASCE/SEI 7
- Y. Install hangers and supports to allow controlled thermal and seismic movement of piping systems to permit freedom of movement between pipe anchors, and to facilitate action of expansion joints, expansion loops, expansion bends, and similar units.
- Z. Install lateral bracing with pipe hangers and supports to prevent swaying
- AA. Install building attachments within concrete slabs or attach to structural steel. Install additional attachments at concentrated loads, including valves, flanges, and strainers. NPS 2-1/2 (DN 65) and larger and at changes in direction of piping. Install concrete inserts before concrete is placed; fasten inserts to forms and install reinforcing bars through openings at top of inserts.
- BB. Install hangers and supports so that piping live and dead loads and stresses from movement will not be transmitted to connected equipment.
- CC. Install hangers and supports to provide indicated pipe slopes and to not exceed maximum pipe deflections allowed by ASME B31.9 for building services piping.

## VI. ELECTRICAL WORKS

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

- C. All equipment and installations shall meet or exceed minimum requirements of the Standards and Codes.
- D. Execute work in strict accordance with the best practices of the trades in a thorough, substantial, workmanlike manner by competent workmen.
- E. 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.

## F. PANELBOARDS

- F.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.
- F.2 Enclosures: Flush, Surface, Flush- and surface-mounted cabinets.
  - F.2.1 Rated for environmental conditions at installed location
    - i. Indoor Dry and Clean Locations: NEMA 250, Type 1
    - ii. Outdoor Locations: NEMA 250, Type 3R.
    - iii. Kitchen and Wash-Down Areas: NEMA 250, Type 4X, stainless steel
    - iv. Other Wet or Damp Indoor Locations: NEMA 250, Type 4.
    - v. Indoor Locations Subject to Dust, Falling Dirt, and Dripping Noncorrosive Liquids: NEMA 250, Type 5 or Type 12.
  - F.2.2 Front: Secured to box with concealed trim clamps. For surface-mounted fronts, match box dimensions; for flush-mounted fronts, overlap box.
  - F.2.3 Hinged Front Cover: Entire front trim hinged to box and with standard door within hinged trim cover.
  - F.2.4 Skirt for Surface-Mounted Panelboards: Same gage and finish as panelboard front with flanges for attachment to panelboard, wall, and ceiling or floor.
  - F.2.5 Gutter Extension and Barrier: Same gage and finish as panelboard enclosure; integral with enclosure body. Arrange to isolate individual panel sections.
  - F.2.6 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.
  - F.2.7 Directory Card: Inside panelboard door, mounted in transparent card holder metal frame with transparent protective cover.
- F.3 Incoming Mains Location: Top or Bottom.
- F.4 Phase, Neutral, and Ground Buses:
  - F.4.1 Material: Hard-drawn copper, 98 percent conductivity.



- F.4.2 Equipment Ground Bus: Adequate for feeder and branch-circuit equipment grounding conductors; bonded to box.
- F.4.3 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.




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**TECHNICAL SPECIFICATIONS**  
**QUEZON CITY INFRASTRUCTURE PROJECT**

**PROJECT TITLE: PROPOSED REHABILITATION OF SAINT CATHERINE DAY CARE CENTER ✓**

**LOCATION: BARANGAY HOLY SPIRIT, DISTRICT 2, QUEZON CITY ✓**

**I. 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 not anymore required within the construction site including the disassembly, removal and site clean-up of offices and other facilities assembled on the site specifically for this contract.

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

## II. SITE WORKS

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

### III. CIVIL / STRUCTURAL WORKS

#### A. 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, foam, 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 whatever necessary to confine the concrete and shape it to the required lines, or to insure the concrete of contamination with materials caving from adjacent, excavated surfaces. Forms shall have sufficient strength to withstand the pressure resulting from placement and vibration of the concrete, and shall be maintained rigidly in correct position. Forms shall be sufficiently tight to prevent loss 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 formed 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 curing 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 embedded items, or elsewhere as directed, the discharge shall be so controlled that the concrete may be effectively compacted into horizontal layers not exceeding 30 centimeters in depth within the maximum lateral movement specified
- 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 embedded in concrete beginning to set or already set shall not be disturbed by vibrators. Consolidation around major embedded 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

- 1. 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.

## B. 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 E70xx 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.

## IV. ARCHITECTURAL WORKS

### A. FABRICATED DOORS & WINDOWS

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

### B. PAINTING WORKS

- a. All primers, thinners and putty, also waterproofing for internal and external application shall be the same brand as the specified material.

- b. Application shall be as per paint Manufacturer's specification and recommendation.
- c. Provide all drop cloth and other covering requisite for protection of floors, walls, aluminum, glass, finishes and other works.
- d. All applications and methods used shall strictly follow the Manufacturer's Instructions and Specifications.
- e. All surfaces including masonry wall shall be thoroughly cleaned, putted, sandpapered, rubbed and polished; masonry wall shall be treated with Neutralizer.
- f. 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.
- g. All other surfaces endangered by stains and paint marks should be taped and covered with craft paper

#### V. SANITARY / PLUMBING WORKS

- A. Comply with the current applicable codes, ordinances, and regulations of the authority or authorities having jurisdiction, the rules, regulations and requirements of the utility companies (as applicable)
- B. Supply, installation and testing of the following:
  - 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 3m of water higher than the test section and wait for 15 min, then check for leakage at every joints.
- V. Testing of drainage systems shall be carried out in sections by dividing the system horizontally. Each section shall comprise pipework and fitting for three floors/storeys required for testing.
- W. Drainage pressure pipe shall be hydraulic tested at minimum pressure 50 psi.
- X. Hangers and supports for plumbing piping and equipment shall withstand the effects of gravity loads and stresses within limits and under conditions indicated according to ASCE/SEI 7.
- Y. Install hangers and supports to allow controlled thermal and seismic movement of piping systems, to permit freedom of movement between pipe anchors, and to facilitate action of expansion joints, expansion loops, expansion bends, and similar units.



- Z. Install lateral bracing with pipe hangers and supports to prevent swaying.
- AA. Install building attachments within concrete slabs or attach to structural steel. Install additional attachments at concentrated loads, including valves, flanges, and strainers, NPS 2-1/2 (DN 65) and larger and at changes in direction of piping. Install concrete inserts before concrete is placed; fasten inserts to forms and install reinforcing bars through openings at top of inserts.
- BB. Install hangers and supports so that piping live and dead loads and stresses from movement will not be transmitted to connected equipment.
- CC. Install hangers and supports to provide indicated pipe slopes and to not exceed maximum pipe deflections allowed by ASME B31.9 for building services piping.

  
AERON JAREM T. REMILLETE

Planning and Programming Division

  
JOCELYN A. NAONG

Planning and Programming Division



Republic of the Philippines  
Quezon City

## CITY ENGINEERING DEPARTMENT

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### TECHNICAL SPECIFICATIONS QUEZON CITY INFRASTRUCTURE PROJECT

**PROJECT TITLE: PROPOSED REHABILITATION OF STO. NIÑO GILARMI DAY CARE CENTER**

**LOCATION: BARANGAY HOLY SPIRIT, DISTRICT 2, QUEZON CITY**

#### I. 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 not anymore required within the construction site including the disassembly, removal and site clean-up of offices and other facilities assembled on the site specifically for this contract.

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

## II. SITE WORKS

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

### III. CIVIL / STRUCTURAL WORKS

#### A. 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 whatever necessary to confine the concrete and shape it to the required lines, or to insure the concrete of contamination with materials caving from adjacent, excavated surfaces. Forms shall have sufficient strength to withstand the pressure resulting from placement and vibration of the concrete, and shall be maintained rigidly in correct position. Forms shall be sufficiently tight to prevent loss 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 formed 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 curing 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 embedded items, or elsewhere as directed, the discharge shall be so controlled that the concrete may be effectively compacted into horizontal layers not exceeding 30 centimeters in depth within the maximum lateral movement specified.
- 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 embedded in concrete beginning to set or already set shall not be disturbed by vibrators. Consolidation around major embedded 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.

## **B. MASONRY**

- a. Masonry Units (CHB):
  - i. 100mm thick for all interior walls and exterior walls unless otherwise indicated.
  - ii. Use 400 psi for non-load bearing blocks and 700 psi for load bearing blocks where required.
  - iii. 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 & lintel beams as specified in the structural drawings or as specified or as deemed required to assure a stabilized wall due to height & other considerations.
- b. Sand:
  - \$-1, washed, clean and greenish in color.
- c. Mortar:
  - One part "Portland" cement and two parts sand and water but not more than three parts sand and water.
- d. Plaster bond:
  - Apply plaster bond to all wall area.

## **IV. ARCHITECTURAL WORKS**

### **A. TILE WORKS**

- a. Both broken and unbroken old tiles must be chip-off
- b. Surface should be smoothen & clean.
- c. Homogeneous tiles shall be soaked in clean water prior to installation.
- d. Lay the tiles true to profile as specified in the plan

### **B. FABRICATED DOORS**

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

### **C. PAINTING WORKS**

- a. All primers, thinners and putty, also waterproofing for internal and external application shall be the same brand as the specified material.
- b. Application shall be as per paint Manufacturer's specification and recommendation.
- c. Provide all drop cloth and other covering requisite for protection of floors, walls, aluminum, glass, finishes and other works.
- d. All applications and methods used shall strictly follow the Manufacturer's Instructions and Specifications
- e. All surfaces including masonry wall shall be thoroughly cleaned, puttied sandpapered, rubbed and polished, masonry wall shall be treated with Neutralizer

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

## V. SANITARY / PLUMBING WORKS

- A. Comply with the current applicable codes, ordinances, and regulations of the authority or authorities having jurisdiction, the rules, regulations and requirements of the utility companies (as applicable).
- B. Supply, installation and testing of the following.
  - 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 the specification and drawings. Data and sales catalogue of a general nature will not be accepted.

- K. All materials, equipment, components and accessories shall be delivered to the Site in a new condition, properly packed and protected against damage or contamination or distortion, breakage or structural weakening due to handling, adverse weather or other circumstances and, as far as practicable, they shall be kept in the packing cases or under approved protective coverings until required for use.
- L. Any items suffering from damage during manufacture, or in transit, or on site whilst in storage or during erection shall be rejected and replaced without extra cost.
- M. All sanitary fittings and pipework shall be cleaned after installation and keep them in a new condition.
- N. All installed pipelines shall be flushed through with water, rodded when necessary to ensure clearance of debris
- O. Cleaning and flushing shall be carried out in sections as the installation becomes completed.
- P. The Contractor shall carry out hydraulic test on the complete plumbing systems and the drainage system to show that it is functioning satisfactorily within the requirements of this Specification and local regulations.
- Q. The Contractor shall provide suitable test pumps and arrange for a supply of water required in connection with testing of pipework. The test pump shall be fitted with pressure gauges which shall be of suitable range for the pressure being applied
- R. Hydraulic tests shall be carried out as the pipework is installed and shall be completed before chases in walls and ducts are closed. Also test shall be carried out prior to false ceilings and other finishes are installed.
- S. Testing apparatus shall be provided by the Contractor. Where any section of pipework or equipment is unable to withstand the maximum pipework test pressure, it shall be isolated during the pipework test then that section of pipework or equipment shall be re-tested at the appropriate test pressure.
- T. The Sanitary Contractor must carry out any additional tests required by the end-user and/or approving agency.
- U. Drainage pipe shall be tested by filling the pipe with 3m. of water higher than the test section and wait for 15 min, then check for leakage at every joints.
- V. Testing of drainage systems shall be carried out in sections by dividing the system horizontally. Each section shall comprise pipework and fitting for three floors/storeys required for testing.
- W. Drainage pressure pipe shall be hydraulic tested at minimum pressure 50 psi.
- X. Hangers and supports for plumbing piping and equipment shall withstand the effects of gravity loads and stresses within limits and under conditions indicated according to ASCE/SEI 7.
- Y. Install hangers and supports to allow controlled thermal and seismic movement of piping systems, to permit freedom of movement between pipe anchors, and to facilitate action of expansion joints, expansion loops, expansion bends, and similar units.
- Z. Install lateral bracing with pipe hangers and supports to prevent swaying
- AA. Install building attachments within concrete slabs or attach to structural steel. Install additional attachments at concentrated loads, including valves, flanges, and strainers, NPS 2-1/2 (DN 65) and larger and at changes in direction of piping. Install concrete inserts before concrete is placed; fasten inserts to forms and install reinforcing bars through openings at top of inserts.
- BB. Install hangers and supports so that piping live and dead loads and stresses from movement will not be transmitted to connected equipment
- CC. Install hangers and supports to provide indicated pipe slopes and to not exceed maximum pipe deflections allowed by ASME B31.9 for building services piping.



## VI. ELECTRICAL WORKS

- A. 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. Drawings, specifications, codes and standards are minimum requirements. Where requirements differ, the more stringent apply.
- C. All equipment and installations shall meet or exceed minimum requirements of the Standards and Codes.
- D. Execute work in strict accordance with the best practices of the trades in a thorough, substantial, workmanlike manner by competent workmen.
- E. 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.

### F. PANELBOARDS

- F.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.
- F.2 Enclosures: Flush, Surface, Flush- and surface-mounted cabinets.
  - F.2.1 Rated for environmental conditions at installed location.
    - i. Indoor Dry and Clean Locations. NEMA 250, Type 1
    - ii. Outdoor Locations: NEMA 250, Type 3R
    - iii. Kitchen and Wash-Down Areas: NEMA 250, Type 4X, stainless steel.
    - iv. Other Wet or Damp Indoor Locations: NEMA 250, Type 4
    - v. Indoor Locations Subject to Dust Falling Dirt, and Dripping Noncorrosive Liquids. NEMA 250, Type 5 or Type 12.
  - F.2.2 Front: Secured to box with concealed trim clamps. For surface-mounted fronts, match box dimensions; for flush-mounted fronts, overlap box
  - F.2.3 Hinged Front Cover: Entire front trim hinged to box and with standard door within hinged trim cover.
  - F.2.4 Skirt for Surface-Mounted Panelboards: Same gage and finish as panelboard front with flanges for attachment to panelboard, wall, and ceiling or floor.
  - F.2.5 Gutter Extension and Barrier: Same gage and finish as panelboard enclosure; integral with enclosure body. Arrange to isolate individual panel sections.
  - F.2.6 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.

- ui. Fungus Proofing: Permanent fungicidal treatment for overcurrent protective devices and other components
- F.2.7 Directory Card: Inside panelboard door, mounted in transparent card holder metal frame with transparent protective cover.
- F.3 Incoming Mains Location. Top or Bottom.
- F.4 Phase, Neutral, and Ground Buses:
- F.4.1 Material: Hard-drawn copper, 98 percent conductivity.
  - F.4.2 Equipment Ground Bus. Adequate for feeder and branch-circuit equipment grounding conductors; bonded to box
  - F.4.3 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.



MIKKI J. DE GRACIA

Planning and Programming Division



JOCELYN A. NAONG

Planning and Programming Division

## ***Section VII. Drawings***

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

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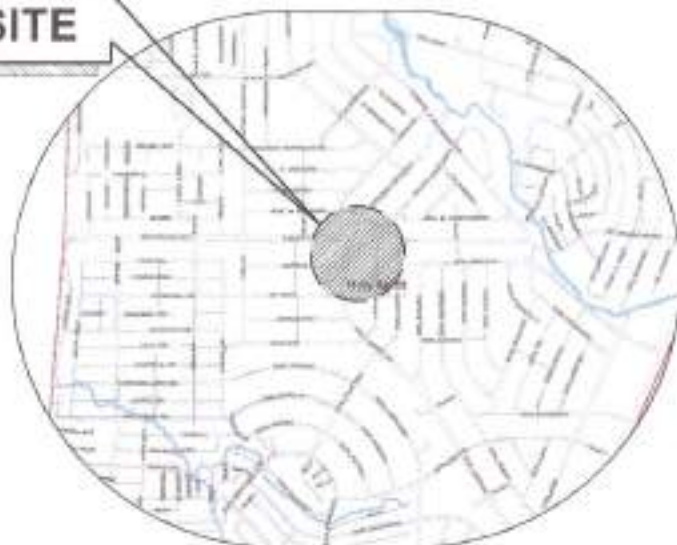
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SITE



## 1 VICINITY MAP

SCALE: NTS

SITE



## 2 LOCATION PLAN

SCALE: NTS

## 3 PERSPECTIVE

SCALE: NTS



Republika ng Pilipinas  
Lungsod ng Quezon  
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:

PROPOSED CONSTRUCTION OF  
HAND WASHING FACILITY AND  
REHABILITATION OF BARANGAY  
COMPLEX DAYCARE CENTER

LOCATION:

BARANGAY HOLY SPIRIT DISTRICT 2, QUEZON CITY

DRAWN BY: DA

DATE: AUG 26, 2020

CHECKED BY: JES

REVISION NO.: 1

DESIGNED BY:

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

RECOMMENDED APPROVAL:

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

APPROVED BY:

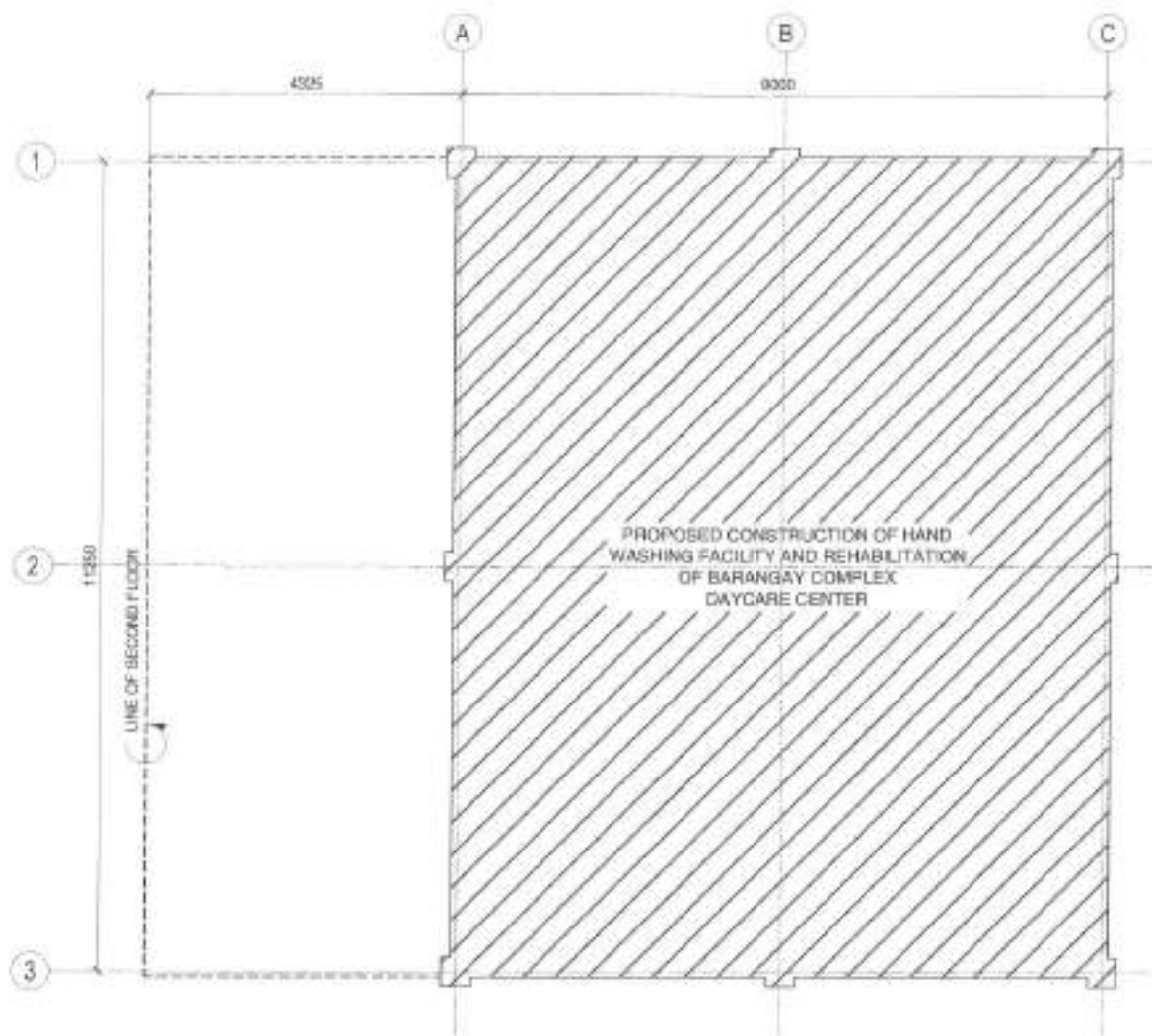
HON. RA. JOSEFINA G. BELMONTE  
CITY MAYOR, QUEZON CITY

SHEET CONTENT:

VICINITY MAP  
LOCATION PLAN  
PERSPECTIVE

SHEET NO.

AR-01  
01/13



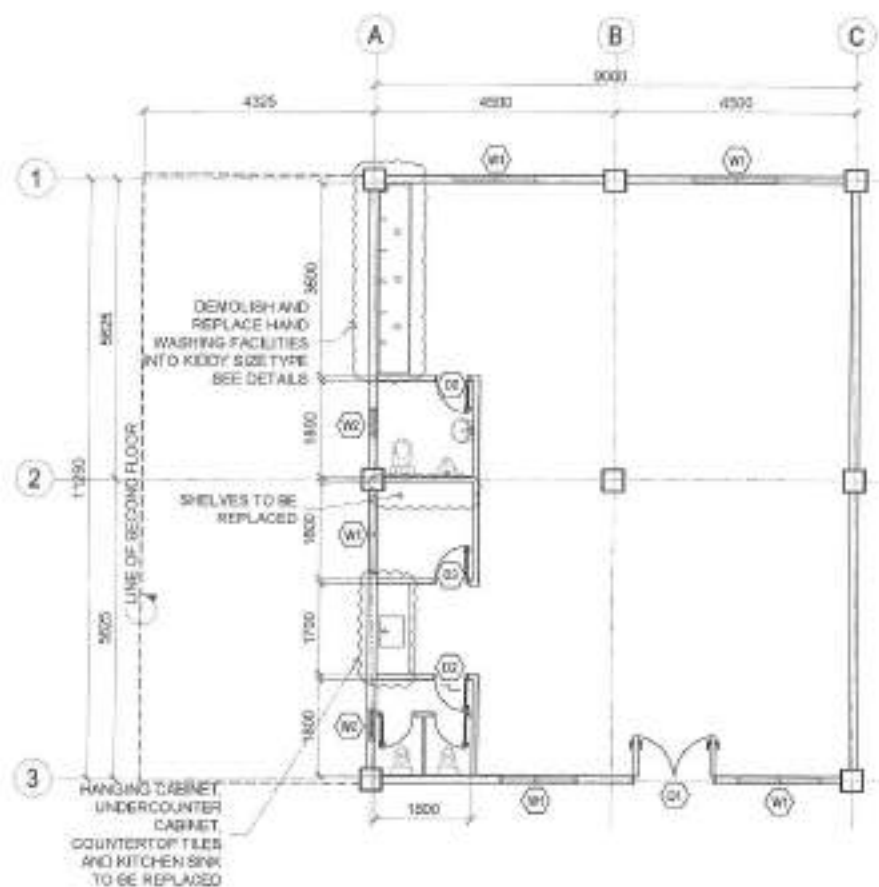
## 1 SITE DEVELOPMENT PLAN

SCALE: NTS



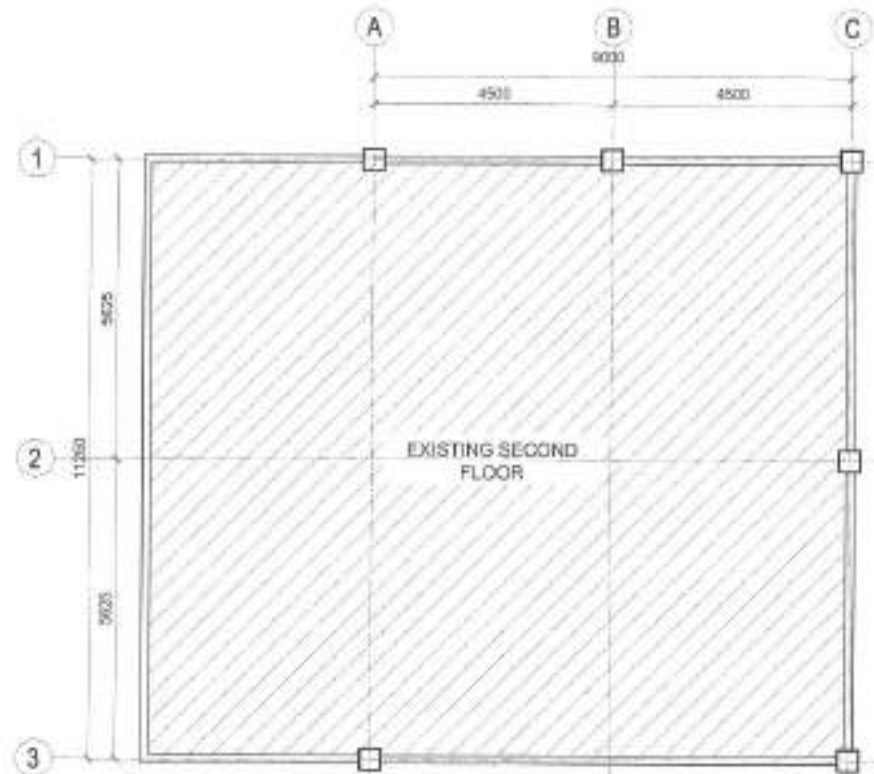
Republika ng Pilipinas  
Lungsod ng Quezon  
CITY ENGINEERING DEPARTMENT

| PROJECT TITLE   | DESIGNED BY                           | SUBMITTED BY  | RECOMMENDED APPROVAL  | APPROVED BY   | SHEET CONTENT         | SHEET NO.      |
|---|---------------------------------------|---|---|---|-----------------------|----------------|
| PROPOSED CONSTRUCTION OF<br>HAND WASHING FACILITY AND<br>REHABILITATION OF BARANGAY<br>COMPLEX DAYCARE CENTER | DATE: AUG 26, 2021<br>CHECKED BY: JMI |   |   |   | SITE DEVELOPMENT PLAN | AR-02<br>02/13 |
| LOCATION:<br>BARANGAY HOLY SPIRIT DISTRICT 2, QUEZON CITY   | REVISION NO.: 1                       | ENGR. LEO S. DEL ROSARIO<br>HEAD, PLANNING & DESIGNING DIVISION | ENGR. ISAGANI R. VERZOSA, JR.<br>D.C. CITY ENGINEERING DEPARTMENT | HON. MA. JOSEFINA G. BELWONTE<br>CITY MAYOR - QUEZON CITY |                       |                |



1 EXISTING GROUND FLOOR

SCALE: 1:100 METERS



2 EXISTING SECOND FLOOR

SCALE: 1:100 METERS



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CITY ENGINEERING DEPARTMENT

PROJECT TITLE:

PROPOSED CONSTRUCTION OF  
HAND WASHING FACILITY AND  
REHABILITATION OF BARANGAY  
COMPLEX DAYCARE CENTER

LOCATION:

BARANGAY HOLY SPirit DISTRICT 3, QUEZON CITY

DRAWN BY: ERE

DATE: AUG 06, 2011

CHECKED BY: JH

REVISION NO.: 1

SUBMITTED BY:

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

RECOMMENDING APPROVAL:

APPROVED BY:

ENGR. JOSEPH M. R. VERZOSA, JR.  
DIR. OF PLANNING & PROJECTS DIVISION

APPROVED BY:

APPROVED BY:

HON. RA. JOSEFINA G. BELMONTE  
CITY MAYOR, QUEZON CITY

APPROVED BY:

SHEET CONTENT:

EXISTING GROUND  
FLOOR PLAN  
EXISTING SECOND  
FLOOR

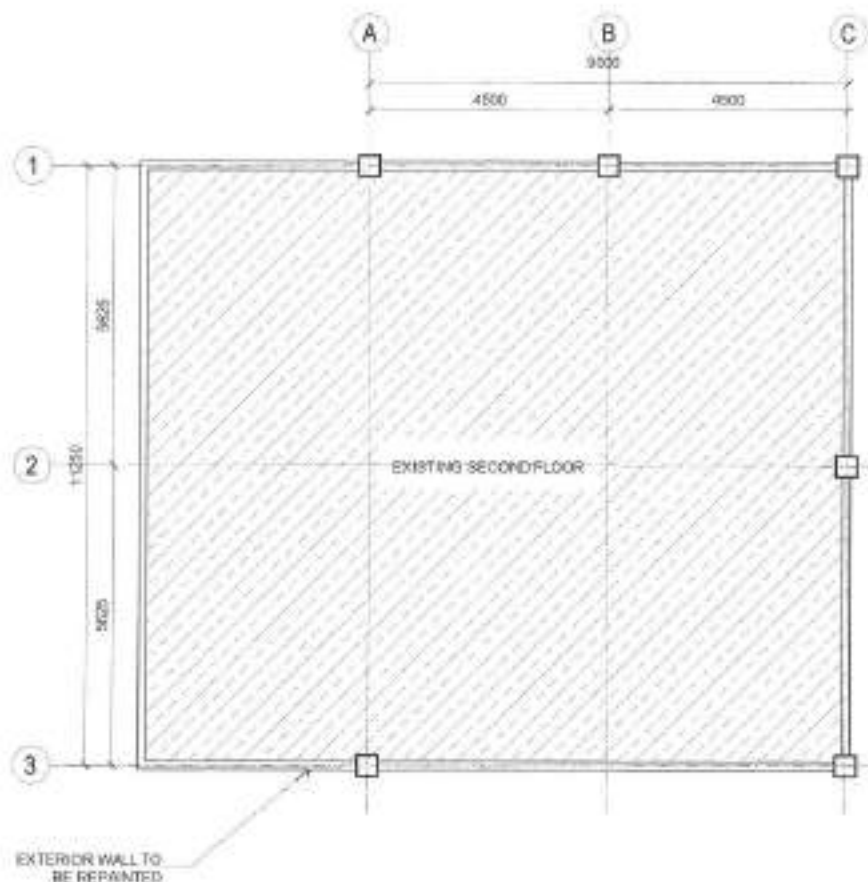
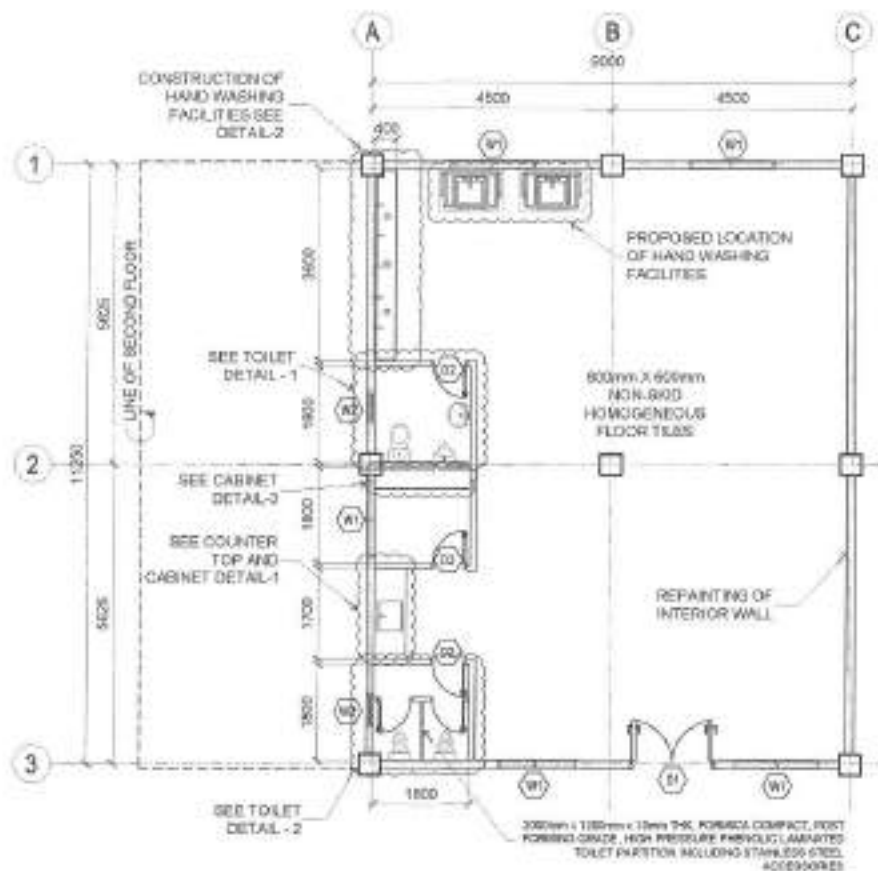
SHEET NO.:

SHEET NO.:

AR-03  
0313

SHEET NO.:





## 1 PROPOSED GROUND FLOOR PLAN

SCALE: 1:100 METERS

## 2 SECOND FLOOR PLAN

SCALE: 1:100 METERS



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Lungsod ng Quezon  
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:

PROPOSED CONSTRUCTION OF  
HAND WASHING FACILITY AND  
REHABILITATION OF BARANGAY  
COMPLEX DAYCARE CENTER

LOCATION:

BARANGAY HELY SPIRIT DISTRICT, QUEZON CITY

DRAWN BY: EME

DATE: AUG. 26, 2021

CHECKED BY: JR

REVISION NO.: 1

SUBMITTED BY:

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

RECOMMENDING APPROVAL:

ENGR. MAGANI R. VERZOSA, JR.  
C.E. CITY ENGINEER & CHIEF PLANNING

APPROVED BY:

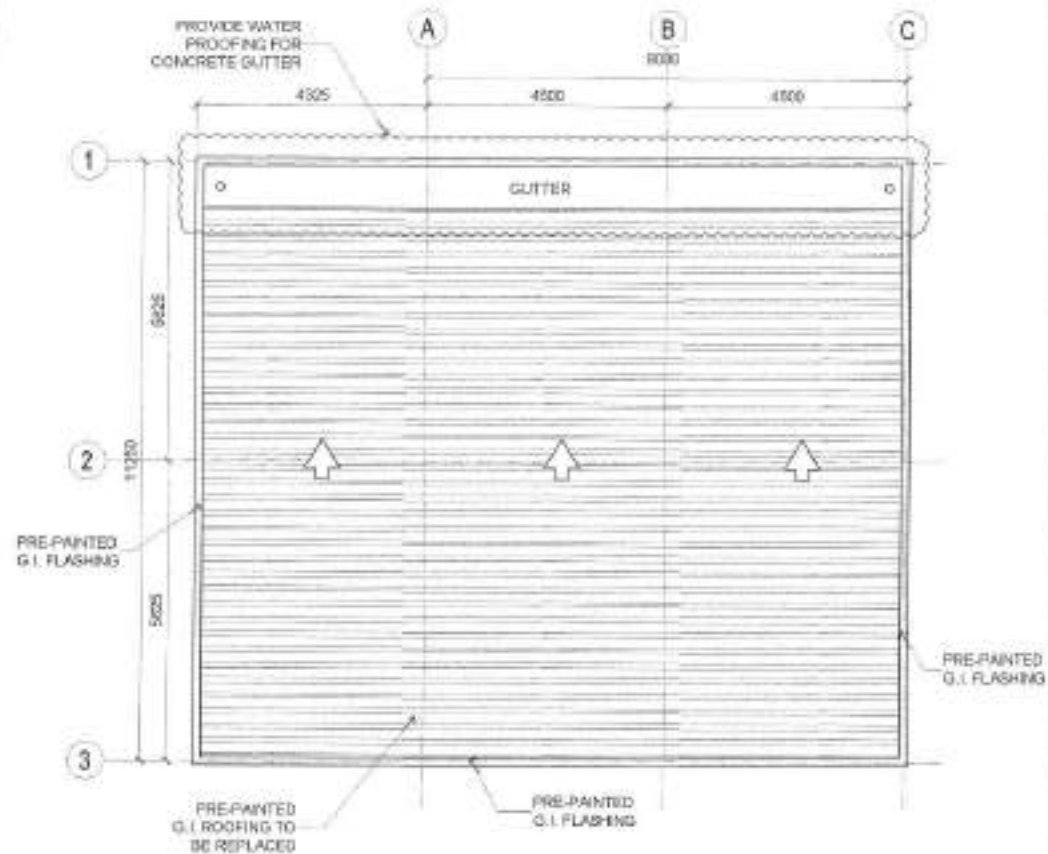
HON. MA. JOSEFINA G. DELMONTA  
CITY MAYOR, QUEZON CITY

SHEET CONTENT:

PROPOSED GROUND  
FLOOR PLAN  
PROPOSED SECOND  
FLOOR PLAN

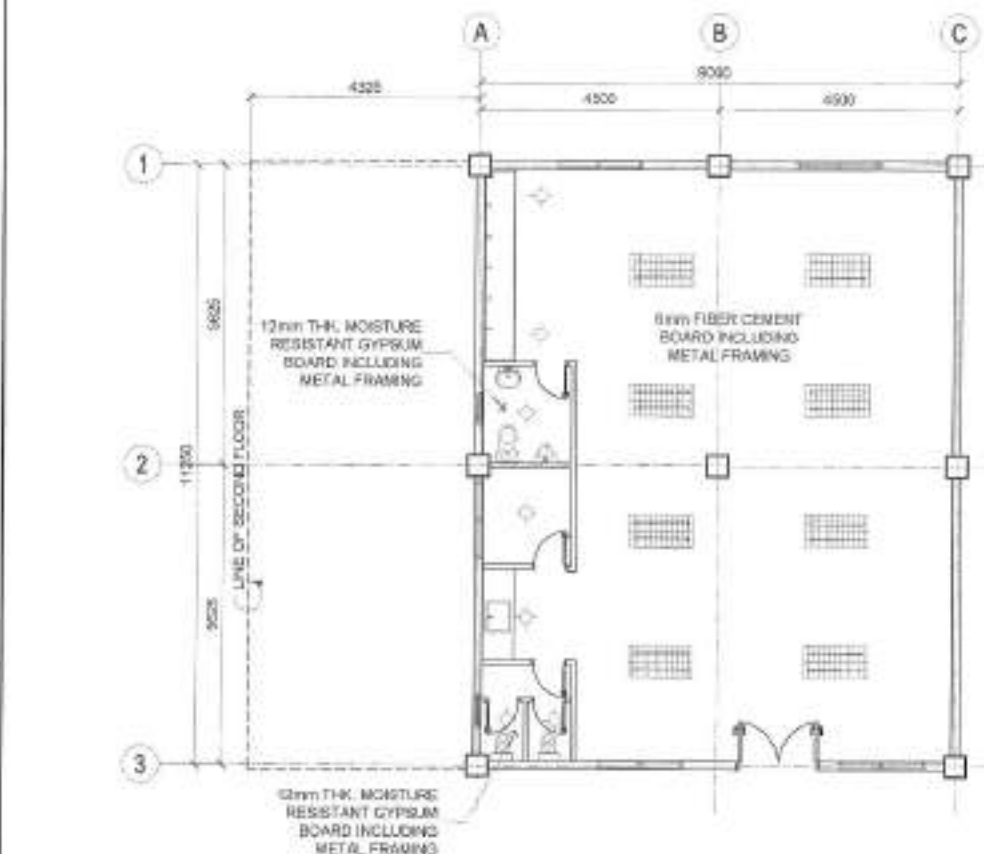
SHEET NO.:

AR-04  
04 13



1 ROOF PLAN

SCALE: 1:100 METERS



2 GROUND FLOOR REFLECTED CEILING PLAN

SCALE: 1:100 METERS



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Lungsod ng Cagayan  
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:

PROPOSED CONSTRUCTION OF  
HAND WASHING FACILITY AND  
REHABILITATION OF BARANGAY  
COMPLEX DAYCARE CENTER

LOCATION:

BARANGAY HOLY SPIRIT DISTRICT 2, CAGAYAN CITY

DRAWN BY: EMO

DATE: MAR. 25, 2021

CHECKED BY: JMS

REVISION NO.: 1

SUBMITTED BY:

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

RECOMMENDING APPROVAL:

ENGR. BARBARA R. VERZOSA, JR.  
D.C. OF ENGINEERING DEPARTMENT

APPROVED BY:

HON. MA. JOSEFINA G. BELMORTE  
CITY ENGINEER - CAGAYAN CITY

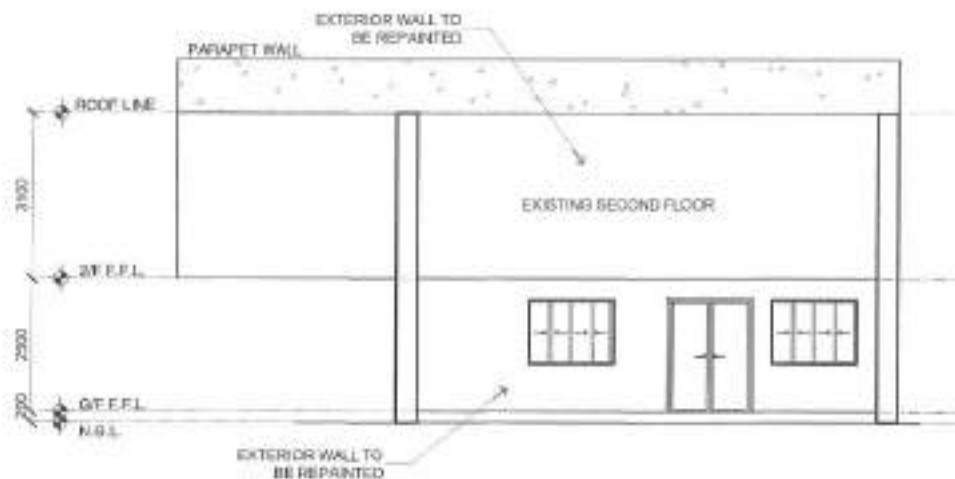
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ROOF PLAN  
GROUND FLOOR  
REFLECTED CEILING  
PLAN

SHEET NO.

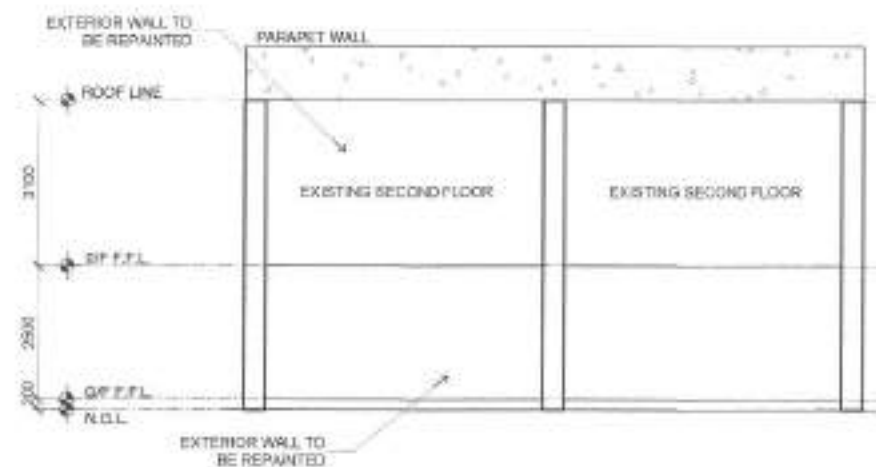
AR-05  
05-13





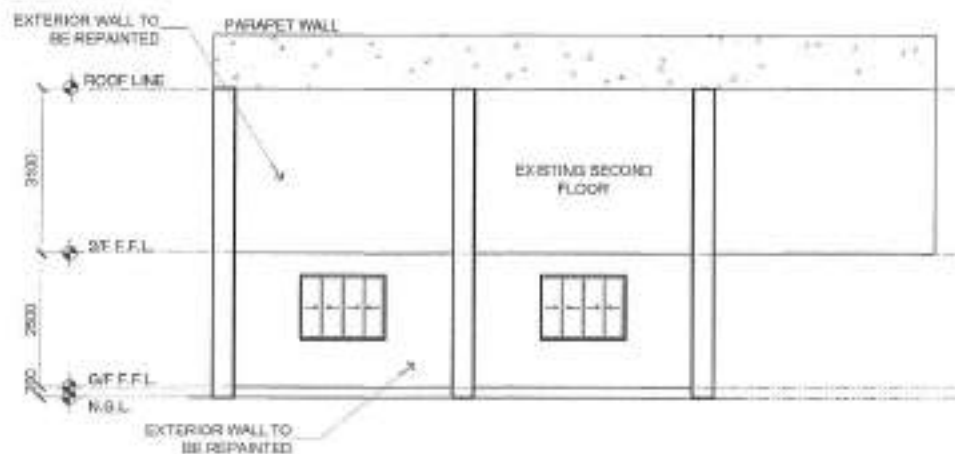
1 FRONT ELEVATION

SCALE: 1:100 METERS



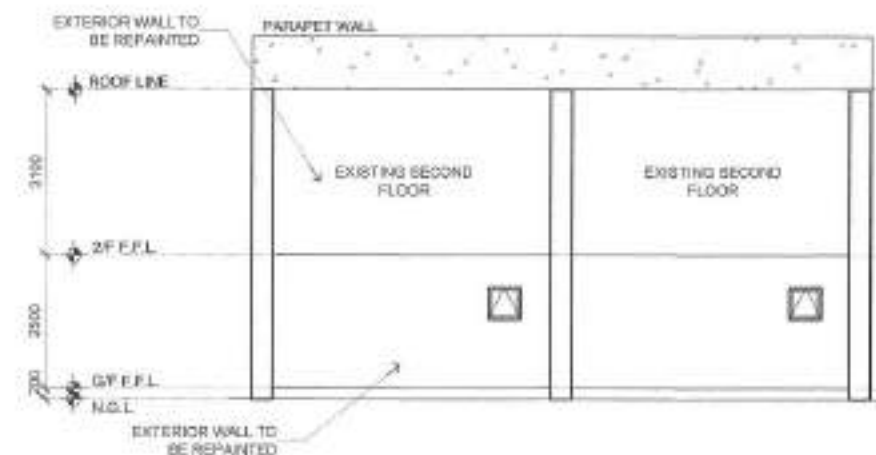
3 LEFT SIDE ELEVATION

SCALE: 1:100 METERS



2 REAR ELEVATION

SCALE: 1:100 METERS



4 RIGHT SIDE ELEVATION

SCALE: 1:100 METERS



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Lungsod ng Quezon  
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:

PROPOSED CONSTRUCTION OF  
HAND WASHING FACILITY AND  
REHABILITATION OF BARANGAY  
COMPLEX DAYCARE CENTER

LOCATION:

BARANGAY HEY WRIGHT DISTRICT 13 QUEZON CITY

DRAWN BY - EMC

DATE - MAR. 26, 2021

CHECKED BY - JCY

REVISION NO. 1

SUBMITTED TO:

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

RECOMMENDING APPROVAL:

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

APPROVED BY:

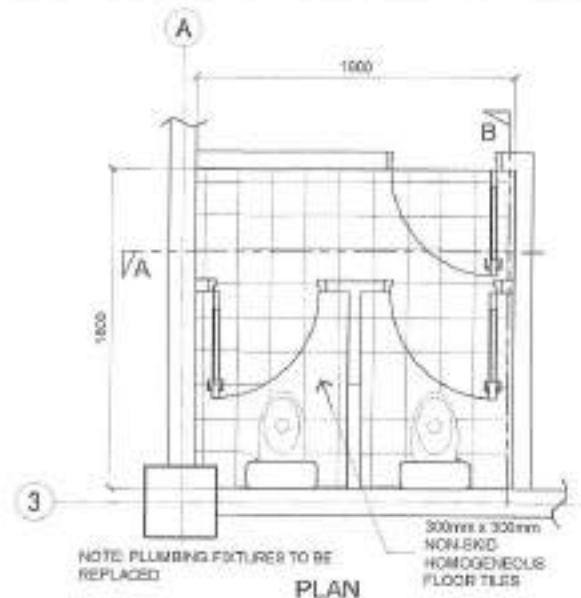
MDL. MA. JOSEFINA G. BELMONTTE  
CITY ENGINEER - QUEZON CITY

SHEET CONTENT:

FRONT ELEVATION  
REAR ELEVATION  
LEFT SIDE ELEVATION  
RIGHT SIDE ELEVATION

SHEET NO.:

AR-06  
06 13



300mm x 1200mm x 10mm THK. FORMICA COMPACT, PORT FORMING GRADE, HIGH PRESSURE PHENOLIC LAMINATED TOILET PARTITION INCLUDING STAINLESS STEEL ACCESSORIES



1 TOILET DETAIL - 1

SCALE: 1:50 METERS

1 TOILET DETAIL - 2

SCALE: 1:50 METERS



Republika ng Pilipinas  
Lungsod ng Quezon  
CITY ENGINEERING DEPARTMENT

|  |                                     |
|--|-------------------------------------|
| PROJECT TITLE:   | DESIGNED BY: DR. LEO S. DEL ROSARIO |
| PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF BARANGAY COMPLEX DAYCARE CENTER | CHECKED BY: [Signature]             |
| LOCATION: BAWANGAY HELY STREET DISTRICT 2 QUEZON CITY  | REVISION NO: 1                      |

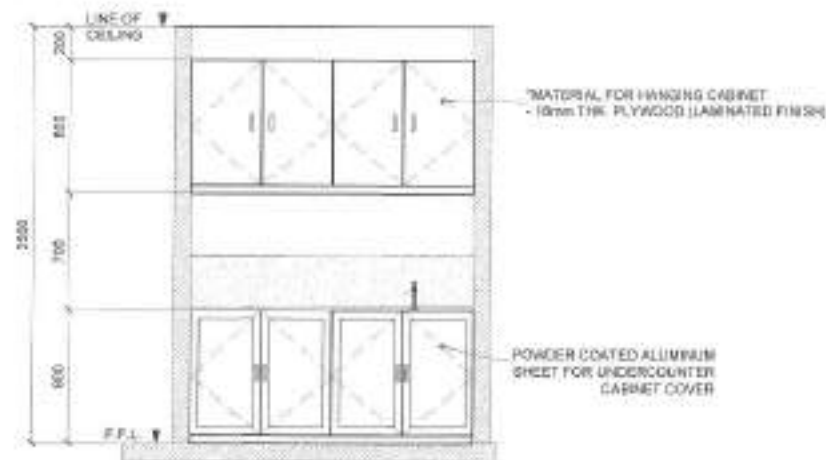
|                                     |   |
|-------------------------------------|---|
| DESIGNED BY: DR. LEO S. DEL ROSARIO | RECOMMENDED APPROVAL:                                       |
| DATE: AUG. 06, 2021                 | APPROVED BY:  |
| CHECKED BY: [Signature]             | ENGR. IRAGANIR VERZOSA, JR.<br>CH. CITY ENGINEER (GENERAL)  |
| REVISION NO: 1                      | ENGR. LEO S. DEL ROSARIO<br>HEAD, PLUMBING PROGRAM DIVISION |

|  |  |
|--|--|
| RECOMMENDED APPROVAL:                                      | APPROVED BY:   |
| ENGR. IRAGANIR VERZOSA, JR.<br>CH. CITY ENGINEER (GENERAL) | IRON. NA. JOSEFINA G. BELMONTE<br>CITY ENGINEER, QUEZON CITY |

|  |  |
|--|--|
| RECOMMENDED APPROVAL:                                      | APPROVED BY:   |
| ENGR. IRAGANIR VERZOSA, JR.<br>CH. CITY ENGINEER (GENERAL) | IRON. NA. JOSEFINA G. BELMONTE<br>CITY ENGINEER, QUEZON CITY |

|  |                |
|--|----------------|
| SHEET CONTENT:                         | SHEET NO.      |
| TOILET DETAIL - 1<br>TOILET DETAIL - 2 | AR-07<br>07/13 |

|                |
|----------------|
| SHEET NO.      |
| AR-07<br>07/13 |

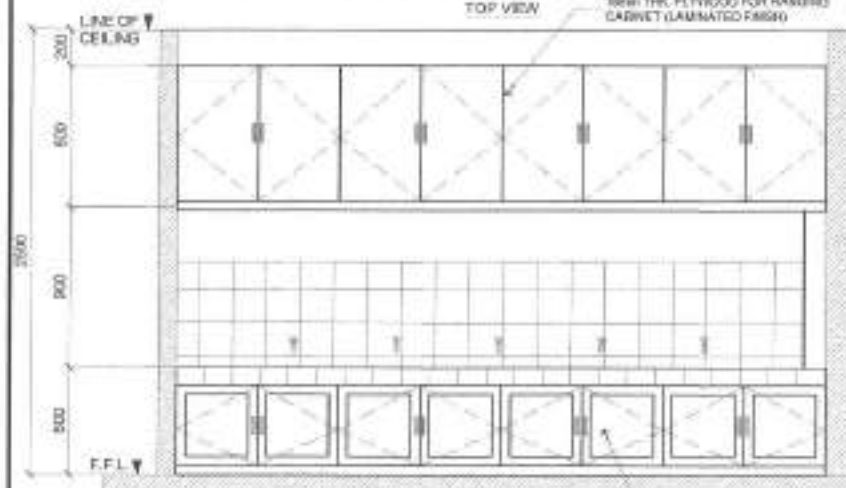


COUNTERTOP DETAIL - 1



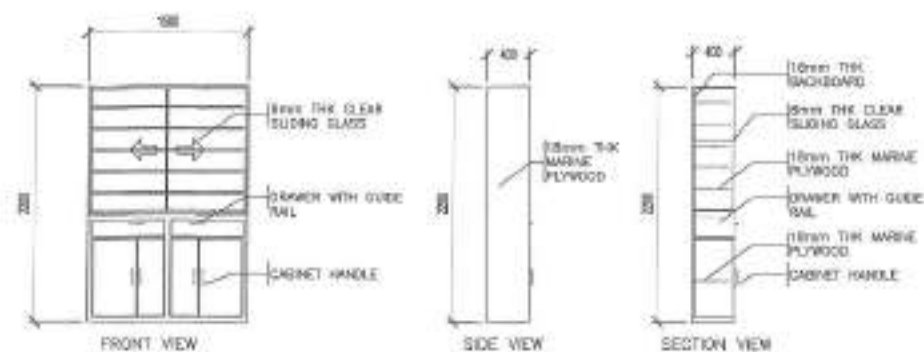
TOP VIEW

18mm THK PLYWOOD FOR HANGING CABINET (LAMINATED FINISH)



HAND WASHING DETAIL - 2

POWDER COATED ALUMINUM SHEET FOR UNDERCOUNTER CABINET COVER



FRONT VIEW

SIDE VIEW

SECTION VIEW

## 2 CABINET DETAIL-3



| NAME        | (D1)         | (D2)                      | (D3)         | (W1)   | (W2)  |
|-------------|--------------|---------------------------|--------------|--|---|
| NO. OF SETS | 1            | 2                         | 1            | 4  | 2   |
| DESCRIPTION | PANEL DOOR   | PVC FLUSH DOOR W/ LOUVERS | PANEL DOOR   | ALUMINUM FRAME POWDER COATED SLIDING WINDOW WITH 5mm THK CLEAR GLASS | ALUMINUM FRAME POWDER COATED AWNING WINDOW WITH 5mm THK CLEAR GLASS |
| LOCATION    | GROUND FLOOR | GROUND FLOOR              | GROUND FLOOR | GROUND FLOOR   | GROUND FLOOR  |

## 1 COUNTER TOP DETAILS

SCALE: 1:50 METERS

## 3 DOORS AND WINDOWS SCHEDULE

SCALE: 1:40 METERS



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CITY ENGINEERING DEPARTMENT

PROJECT TITLE:  
**PROPOSED CONSTRUCTION OF  
HAND WASHING FACILITY AND  
REHABILITATION OF BARANGAY  
COMPLEX DAYCARE CENTER**

LOCATION:  
BARANGAY HOLY SPIRIT DISTRICT 2, QUEZON CITY

DESIGNED BY: ENG. LEO S. DEL ROSARIO  
CHECKED BY: JVN  
REVISION NO.: 1

DATE: MAR 26, 2021

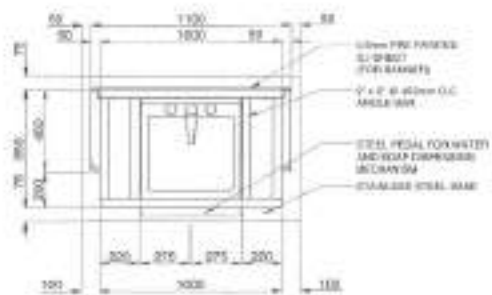
APPROVED BY:  
ENGR. LEO S. DEL ROSARIO  
HEAD, PLANNING AND PROFESSIONAL SERVICES

RECOMMENDED APPROVAL:  
ENGR. MARVIN R. VERZOSA, JR.  
DC, CITY ENGINEERING DEPARTMENT

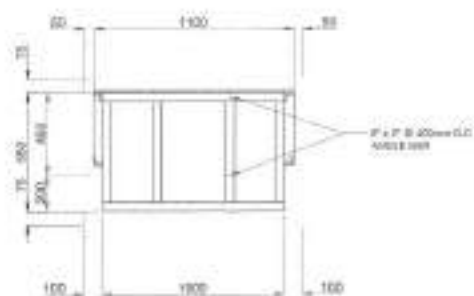
APPROVED BY:  
IRON, MA. JOSEFINA G. BELMORTE  
CITY ENGINEER, QUEZON CITY

SHEET CONTENT:  
COUNTER TOP  
DETAILS  
CABINET DETAIL 3  
DOORS SCHEDULE  
WINDOWS SCHEDULE

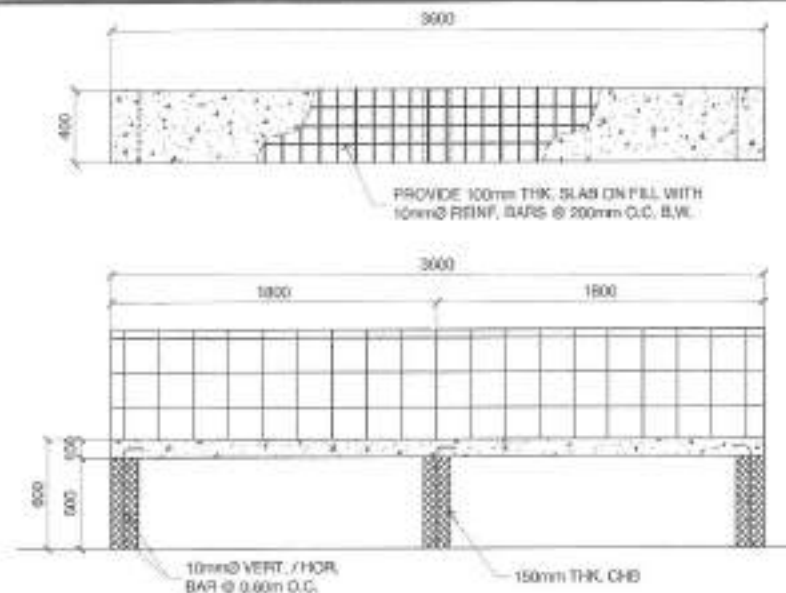
SHEET NO.:  
AR-08  
08/13



PLAN



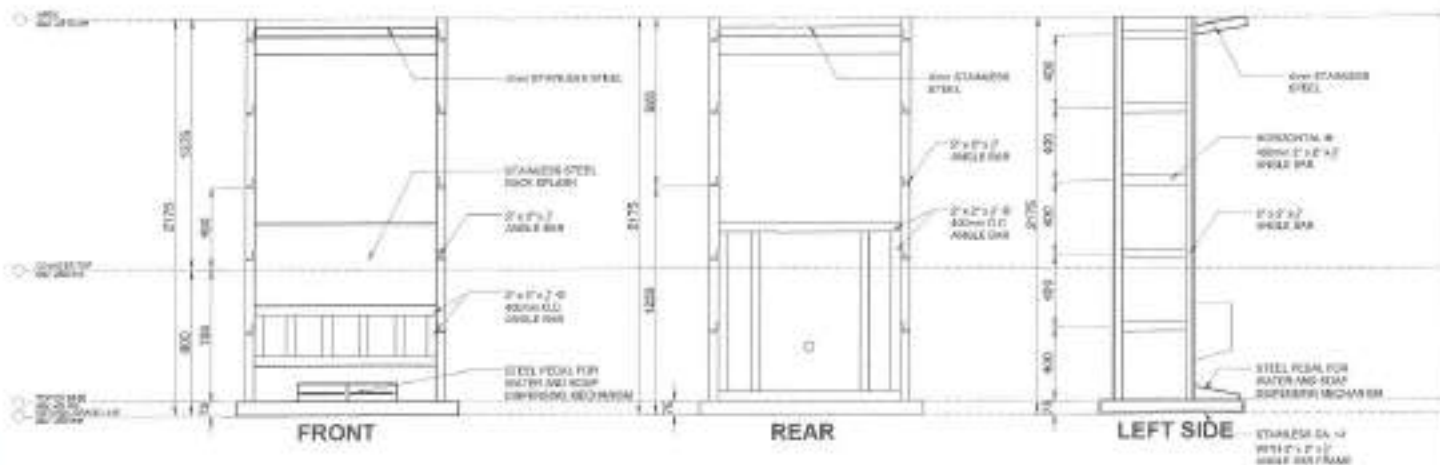
ROOF PLAN



4 HAND WASHING COUNTER DETAIL

SCALE: 1:30r/b

1 SINGLE SINK PORTABLE HAND WASHING STALL PLAN



FRONT

REAR

LEFT SIDE

2 ELEVATIONS

SCALE: 1:30r/b

3 TYPICAL SECTION

SCALE: 1:30r/b



Republic of the Philippines  
Lungsod ng Quezon  
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:  
**PROPOSED CONSTRUCTION OF  
HAND WASHING FACILITY AND  
REHABILITATION OF BARANGAY  
COMPLEX DAYCARE CENTER**

LOCATION:  
BARANGAY HOLY SPIRIT DISTRICT 2, QUEZON CITY

DESIGNED BY: *[Signature]*  
DATE: AUG 05, 2021  
CHECKED BY: *[Signature]*  
REVISION NO.: 1

SUBMITTED BY:  
*[Signature]*  
**ENGR. LEO S. DEL ROSARIO**  
HEAD, PLANNING & PROGRAMMING DIVISION

RECOMMENDING APPROVAL:  
*[Signature]*  
**ENGR. RAFAEL R. VERZOSA, JR.**  
DC, CIVIL ENGINEER, CITY ENGINEERING DEPARTMENT

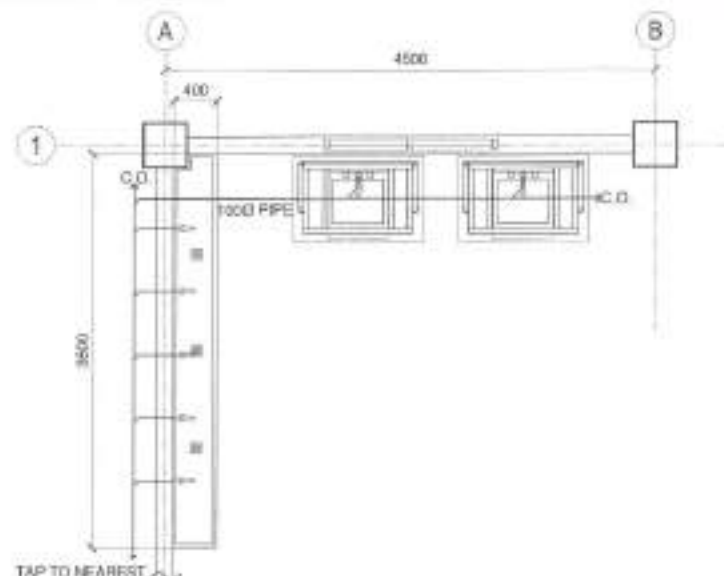
APPROVED BY:  
*[Signature]*  
**HON. MA. JOSEFINA O. BELMONTE**  
CITY MAJOR, QUEZON CITY

SHEET CONTENT:  
SINGLE SINK PORTABLE  
HAND WASHING STALL  
PLAN  
ELEVATIONS & SECTION  
HAND WASHING  
COUNTERS ETCAL

SHEET NO.:  
**ST-1**  
**09/13**

**GENERAL NOTES:**

1. ALL THE PLUMBING/SANITARY WORK INCLUDED HEREIN SHALL BE EXECUTED ACCORDING TO THE PROVISIONS OF THE PHILIPPINE PLUMBING CODE, THE NATIONAL BUILDING CODE, REGULAR AND PROVISIONAL ORDINANCE OF QUEZON CITY.
2. COORDINATE THE DRAWING WITH OTHER RELATED DRAWINGS AND MODIFICATION REQUIRED. THE OWNER SHALL BE NOTIFIED IMMEDIATELY BY AN ENGINEER/ARCHITECT.
3. ALL PIPES SHALL BE INSTALLED AS NOTED IN PLANS AND LOCATIONS HEREIN. PROPOSED LOCATIONS OF CHASE TRAYS SHALL BE WITH PROTECTIVE COVERING BY THE OWNER OR ARCHITECT.
4. PROPOSED SANITARY LINE DEPTH SHALL BE CONFORM TO THE ACTUAL LOCATION, DEPTH, AND BUILT UP STRUCTURE OF ALL EXISTING STRUCTURES AND TYPES AS NOTED BY THE CONTRACTOR.
5. ALL SLOPES FOR HORIZONTAL BRANCHES SHALL BE NOTED IN ALL LEGENDS/CHANGES SHEETS.
6. SIZE OF WATER SUPPLY PIPES TO FIXTURES SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATION.
7. THE CONTRACTOR SHALL VERIFY ALL EXISTING/NEW SANITARY AND CLOSURE IN THE ROOM WITH THE DESIGN AND VERIFY WORK POINT AND WATER AND SERVICE CONNECTION POINT.
8. ALL WATER PIPES AND WASTE STAINS SHALL BE THOROUGHLY FLUSHED AND CLEANED WITH BLEACH SOLUTION OR HYPOCHLORIC SOLUTION.
9. ALL WATER PIPES SHALL BE HYDROSTATICALLY TESTED TO A PRESSURE 1.42 TIMES DESIGN PRESSURE OF THE SYSTEM.
10. ALL SANITARY AND WASTE BRANCH PIPES SHALL BE HYDROSTATICALLY TESTED AT LEAST 15 MINS. HEAD TO VERIFY THAT THE SYSTEM IS LEAK-FREE.
11. ALL DIMENSIONS ARE IN METERS AND ALL PIPES AND FITTINGS SHALL BE EXACT AS NOTED OTHERWISE SPECIFIED.
12. ALL PIPES INSTALLED ON FLOOR SHALL BE PROTECTED BY COVERING.

**1 GENERAL NOTES**

SCALE: NTS

**3 WASTE/ SEWER LAYOUT**

SCALE: 1:50 METERS

**1. SANITARY AND WASTE SYSTEM**

|       |                                  |   |   |                |
|-------|----------------------------------|---|---|----------------|
| —●—●— | WASTE/WATER PIPE                 | ⊗ | ⊗ | WELL STACK     |
| —●—●— | WATER SUPPLY                     | ⊗ | ⊗ | FLOOR DRAIN    |
| —●—●— | SEWER BRANCH                     | ⊗ | ⊗ | CATCH BASIN    |
| —●—●— | FLOOD CLEANOUT (ORANGE CLEANOUT) | ⊗ | ⊗ | WATER MAIN     |
| —●—●— | SEWER CLEAN-OUT                  | ⊗ | ⊗ | STALL TYPE URN |
| ⊗     | WELL STACK/COVER/FLY             | ⊗ | ⊗ | WELL TRAP      |
| ⊗     | WELL STACK EXTENDED THROUGH ROOF |   |   |                |

**2. WATER DISTRIBUTION SYSTEM**

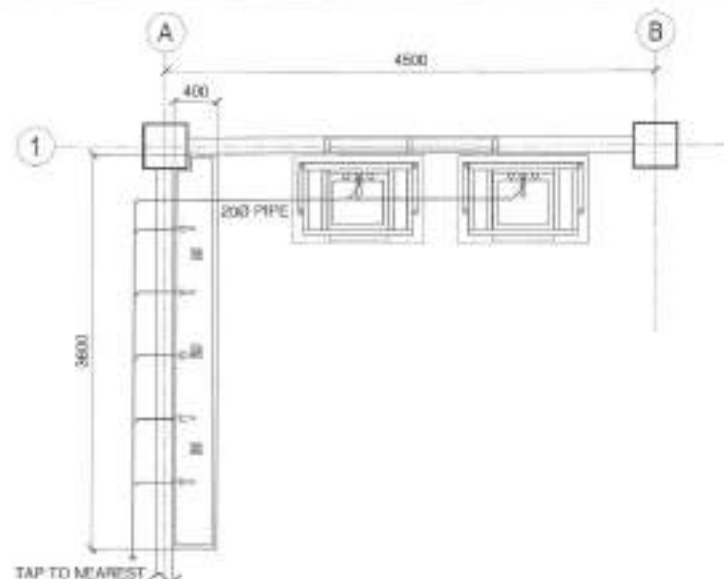
|       |    |                 |
|-------|----|-----------------|
| —●—●— | CR | COLD WATER LINE |
| ⊗     | CR | COLD WATER TAP  |
| ⊗     | CR | WATER VALVE     |
| ⊗     | CR | WATER VALVE     |
| ⊗     | CR | WATER METER     |
| ⊗     | CR | BALCONY BRINE   |

**2 LEGEND AND SYMBOLS**

SCALE: NTS

**4 WATERLINE LAYOUT**

SCALE: 1:50 METERS



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Lungsod ng Quezon  
CITY ENGINEERING DEPARTMENT

|                       |   |
|-----------------------|---|
| PROJECT TITLE:        | PROPOSED CONSTRUCTION OF<br>HAND WASHING FACILITY AND<br>REHABILITATION OF BARANGAY<br>COMPLEX DAYCARE CENTER |
| LOCATION:             | BARANGAY HOLY SPIRIT 3 DISTRICT 3, QUEZON CITY  |
| DRAWN BY: <i>MS</i>   | DATE: AUG. 25, 2021   |
| CHECKED BY: <i>JL</i> | REVISION NO.: 1   |

|                          |                    |
|--------------------------|--------------------|
| SUBMITTED BY:            | <i>MS</i>          |
| ENGR. LEO S. DEL ROSARIO | PRINCIPAL ENGINEER |

|                               |                                   |
|-------------------------------|-----------------------------------|
| RECOMMENDING APPROVAL:        | <i>JL</i>                         |
| ENGR. REGIMIN R. VERZOSA, JR. | CHIEF CITY ENGINEERING DEPARTMENT |

|                               |                         |
|-------------------------------|-------------------------|
| APPROVED BY:                  | <i>JL</i>               |
| HON. MA. JOSEFINA G. BELWONTE | CITY MAYOR, QUEZON CITY |

|                |   |
|----------------|---|
| SHEET CONTENT: | GENERAL NOTES<br>LEGEND AND<br>SYMBOLS<br>WASTE/SEWER<br>LAYOUT<br>WATERLINE LAYOUT |
|----------------|---|

|            |                |
|------------|----------------|
| SHEET NO.: | PL-01<br>10/13 |
|------------|----------------|



**GENERAL NOTES:**

1. ALL ELECTRICAL WORK SHALL BE DONE IN ACCORDANCE WITH THE PROVISIONS OF THE LATEST EDITION OF THE PHILIPPINE ELECTRICAL CODE, THE CODES AND ORDINANCES OF THE LOCAL GOVT. AGENCIES, ALTERNATIVES AND THE REQUIREMENTS OF THE LOCAL POWER AND TELEPHONE UTILITY COMPANY.
2. THE CONTRACTOR SHALL SECURE ALL PERMITS AND PAY ALL FEES NECESSARY FOR THE WORK AND SHALL FURNISH THE DRAWING THROUGH THE ENGINEER, FINAL CERTIFICATE OF ELECTRICAL INSPECTION AND APPROVAL FROM BARANGAY GOVERNMENT AUTHORITIES FOR COMPLETION OF WORK.
3. ALL EXPOSED BRANCH CIRCUITS SHALL BE PVC CONDUITS AND FOR EXPOSED INSTALLATION SHALL BE SECURELY SUPPORTED BY CONDUIT CLAMPS EVERY 100MM CENTER.
4. PULL BOXES SHALL BE PROVIDED BY THE CONTRACTOR AND WHERE NECESSARY TO FACILITATE WIRE PULLING OTHER IF THESE ARE NOT INDICATED ON THE PLANS. (300MM OR ALL PULLBOXES SHALL BE COMPLETED BASED ON THE CODE REQUIREMENTS, RUMAY GROUP) OTHERWISE TO THE ENGINEER FOR APPROVAL. PRIOR TO FABRICATION, LOCATION OF PULLBOXES SHALL BE APPROVED BY THE ARCHITECT/ENGINEER AND MUST BE REFLECTED IN THE "AS BUILT" PLAN.
5. ALL POWER OUTLETS AND SWITCHES SHALL BE BRONZE OR TYPE WITH PHENOLIC GLASS FOR 100 W.
6. PROVIDE OPENED FRUIT CURRENT INTERRUPTER (CIRCUIT BREAKER) FOR LIGHTS AND/OR 100W (ON THE PLAN).
7. ALL METALLIC CABINETS, GARDETS AND EQUIPMENT SHALL BE PROPERLY GROUNDED AND BONDING.
8. SELECT OVERHEAD METERS AND THEIR HEIGHT FOR WALL MOUNTED METER SHALL BE AS FOLLOWS:

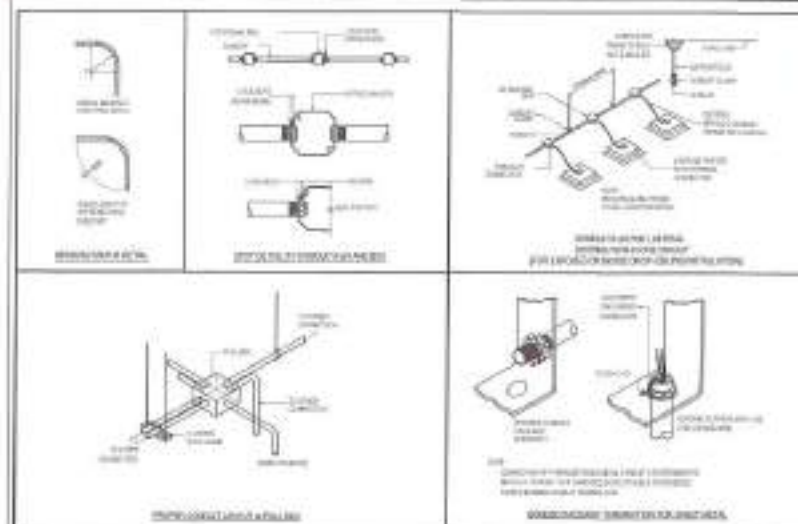
|   |
|---|
| RECEPTACLE OUTLET - 100 MM OFF - 1300MM ABOVE WORKING SURFACE |
| TELEPHONE OUTLET - 300 MM OFF                                 |
| DATA OUTLET - 300 MM OFF                                      |
| LIGHTING SWITCH - 1400 MM OFF                                 |
| PANEL BOARD - 1500 MM OFF                                     |

9. REFER TO MECHANICAL, PLUMBING AND FIRE PROTECTION DRAWINGS FOR FITTINGS AND LOCATIONS OF EQUIPMENT AS WELL AS THEIR CENTERS, DIMENSIONS AND APPROVALS AND ON SHOWING UNDER THE RESPECTIVE SECTIONS.
10. ALL MATERIALS TO BE USED SHALL BE OF THE BEST QUALITY. BRAND NAME AS SPECIFIED.
11. THE DIMENSIONS AND SPECIFICATIONS ARE INTENDED TO PREVENT OVERSIGHTS IN FIELD AND DROPPED OUTS. RECESS/DEPTH OF THE PROJECT/SET DO NOT NECESSARILY INDICATE DIMENSIONS. ACTUAL LOCATIONS, LEVELS AND DISTANCES OF THE EQUIPMENT, THE CONTRACTOR IS SOLELY RESPONSIBLE TO AVOID SUCH MISPLACEMENT AT THE JOBSITE AS LOCATIONS, DISTANCES AND LEVELS ARE GOVERNED BY ACTUAL FIELD CONDITIONS.
12. ANY DISCREPANCY BETWEEN THE PLANS AND SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR CLARIFICATION BEFORE WORK.
13. ALL LIGHT FIXTURES AND CONDUITS SHALL BE 30, 30, 30MM THIN WALL COPPER WIRE UNLESS OTHERWISE NOTED. MANUFACTURER OF WIRE SHALL BE 30, 30, 30MM COPPER WIRE. ALL WIRES AND CABLES SHALL BE COLOR CODED AS FOLLOWS:

|                 |
|-----------------|
| LINE 1 - RED    |
| LINE 2 - YELLOW |
| NEUTRAL - WHITE |
| GROUND - GREEN  |

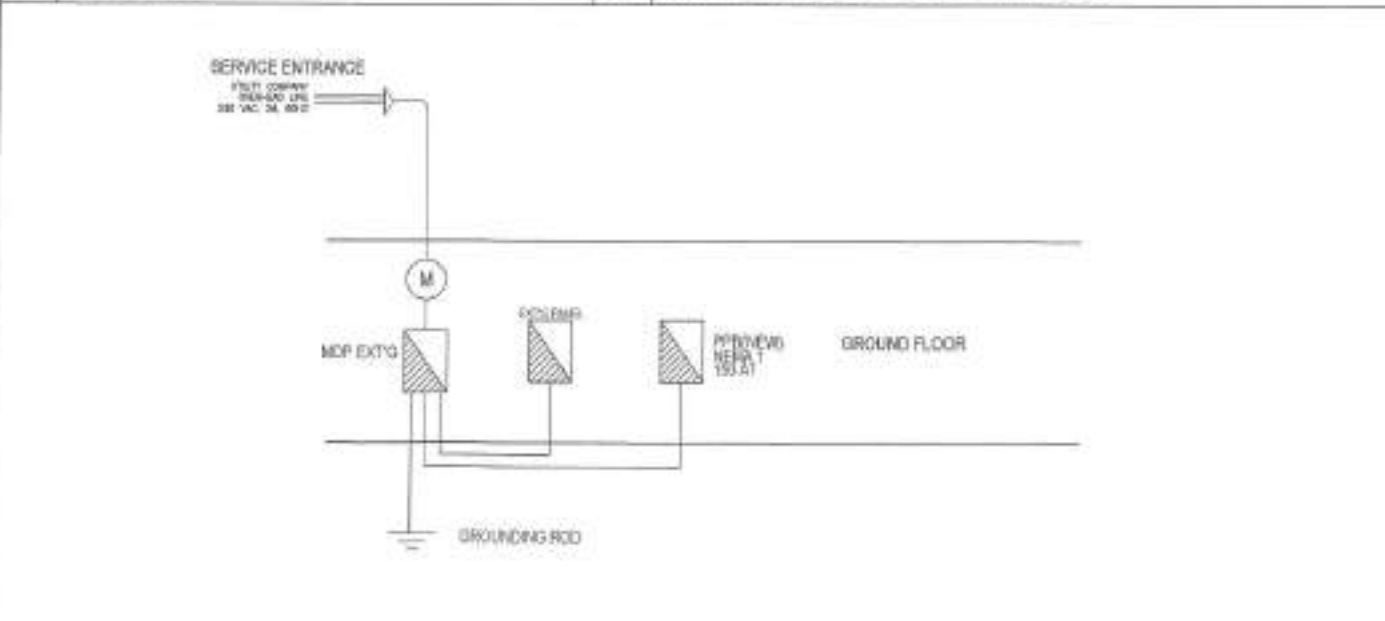
14. BOND WIRE OUTSIDE ENCLOSURE SHALL BE PROTECTED FROM STEEL WITH THICKNESS AS FOLLOWS:  
 MAXIMUM WIDTH OF THE WIRE AT SURFACE SHALL BE:  
 UP TO 100MM AND 150MM - GA 18 BANNED WITH METAL, FINISH EPOXY AND TORCROFT  
 OVER 100MM AND BUT NOT OVER 400MM - GA 14 BANNED WITH METAL, FINISH EPOXY AND TORCROFT  
 OVER 400MM AND BUT NOT OVER 750MM - GA 12 BANNED WITH METAL, FINISH EPOXY AND TORCROFT  
 OVER 750MM - GA 10 BANNED WITH METAL, FINISH EPOXY AND TORCROFT
15. ALL ELECTRICAL WORK SHALL BE EXECUTED BY EXPERIENCED MEN UNDER THE DIRECT SUPERVISION OF A FULL TIME LICENSED ELECTRICAL ENGINEER, AND A ONLY ACCREDITED ELECTRICAL CONTRACTOR BY PRC. WORKS SHALL BE NEATLY PLACED, SECURELY FASTENED AND PROPERLY FINISHED.
16. TYPE OF SERVICE ENTRANCE SHALL BE SINGLE PHASE, TWO WIRE PLUS GROUND, 19 HERTZ, 220V AC NOMINAL.
17. CONDUITS AND CABLES SHALL THERE BE MORE THAN THE EQUIVALENT OF FOUR QUARTY INCHES IN ANY ONE RUN. ALL CONDUIT BENDS SHALL BE 75 DEG MAX. 90 DEG MINIMUM BENDING RADIUS. BENDS MUST BE IN ACCORDANCE TO THE CODE REQUIREMENTS.
18. UPON COMPLETION OF ELECTRICAL CONSTRUCTION WORK, PRELIMINARY FUNCTION TEST AND FUNCTIONALITY TEST SHALL BE PERFORMED BY THE CONTRACTOR PRESENCE OF THE INSTALLATION TEAM REPRESENTATIVE OR FORMS APPROVED BY THE BARANGAY CITY ENGINEERING OFFICE (BCE) REPRESENTATIVE. THE OPERATIONAL TEST FOR ELECTRICAL SYSTEMS SHALL NOT BE SO TO THAT A CORRECT CONNECTION OF WIRE AND RESISTANCE SHALL NOT BE AVOIDED.

|  |                              |
|--|------------------------------|
|  | DUPLEX CONVENIENCE OUTLET    |
|  | PLUGLIGHT                    |
|  | 2X1X8W RECESSED TROFFER TYPE |
|  | SINGLE GANG SWITCH (LIGHTS)  |
|  | TWO GANG SWITCH (LIGHTS)     |
|  | CIRCUIT HOMERUN              |
|  | PANEL BOARD                  |
|  | KILOWATT-HOUR METER          |
|  | SERVICE ENTRANCE             |
|  | NEW CIRCUIT BREAKER          |



**2 LEGEND** SCALE: NTS

**3 MISCELLANEOUS DETAILS** SCALE: NTS



**1 GENERAL NOTES** SCALE: NTS

**4 SINGLE LINE DIAGRAM** SCALE: NTS

Republika ng Pilipinas  
Lungsod ng Quezon  
**CITY ENGINEERING DEPARTMENT**

|   |   |
|---|---|
| PROJECT TITLE:<br><b>PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF BARANGAY COMPLEX DAYCARE CENTER</b> | DRAWN BY: EUGENIE<br>DATE: MAR 26, 2021<br>CHECKED BY: JEN<br>REVISION NO.: 1 |
|---|---|

DESIGNED BY:  
**ENGR. LEONIS DEL ROSARIO**  
RRA - PLANNING & PROGRAMS DIVISION

RECOMMENDING APPROVAL:  
**ENGR. JOSE RAMON R. VERZOSA, JR.**  
CITY ENGINEERING DEPARTMENT

APPROVED BY:  
**HON. MA. JOSEFINA G. BELMONTÉ**  
CITY ENGINEER, QUEZON CITY

|  |  |
|--|--|
| SHEET CONTENT:<br>GENERAL NOTES, LEGENDS AND SYMBOLS, MISCELLANEOUS DETAILS, SINGLE LINE DIAGRAM | SHEET NO.:<br><b>EL-01</b><br><b>11/13</b> |
|--|--|

## PPB

| CCT NO.              | LOAD DESCRIPTION             | VOLT | POWER | CURRENT (AMPERE) | CIRCUIT BREAKER |    |   | WIRE AND CONDUIT      |                       |             |
|----------------------|------------------------------|------|-------|------------------|-----------------|----|---|-----------------------|-----------------------|-------------|
|                      |                              |      |       |                  | A1              | A2 | F | UNGROD<br>TYPE        | GROUND<br>TYPE        | MMB<br>TYPE |
| 1                    | EXISTING                     | 230  | 1800  | 4.35             | 20              | 30 | 2 | 1 - 25mm <sup>2</sup> | 1 - 15mm <sup>2</sup> | 20 mm Ø PVC |
| 2                    | EXISTING                     | 230  | 1800  | 4.35             | 20              | 30 | 2 | 1 - 25mm <sup>2</sup> | 1 - 15mm <sup>2</sup> | 20 mm Ø PVC |
| 3                    | EXISTING                     | 230  | 1800  | 4.35             | 20              | 30 | 2 | 1 - 25mm <sup>2</sup> | 1 - 15mm <sup>2</sup> | 20 mm Ø PVC |
| 4                    | EXISTING                     | 230  | 1800  | 4.35             | 20              | 30 | 2 | 1 - 25mm <sup>2</sup> | 1 - 15mm <sup>2</sup> | 20 mm Ø PVC |
| 5                    | EXISTING                     | 230  | 2000  | 4.35             | 20              | 30 | 2 | 1 - 25mm <sup>2</sup> | 1 - 15mm <sup>2</sup> | 20 mm Ø PVC |
| 6                    | EXISTING                     | 230  | 1800  | 4.35             | 20              | 30 | 2 | 1 - 25mm <sup>2</sup> | 1 - 15mm <sup>2</sup> | 20 mm Ø PVC |
| 7                    | EXISTING                     | 230  | 1800  | 4.35             | 20              | 30 | 2 | 1 - 25mm <sup>2</sup> | 1 - 15mm <sup>2</sup> | 20 mm Ø PVC |
| 8                    | EXISTING                     | 230  | 1800  | 4.35             | 20              | 30 | 2 | 1 - 25mm <sup>2</sup> | 1 - 15mm <sup>2</sup> | 20 mm Ø PVC |
| 9                    | EXISTING                     | 230  | 2000  | 4.35             | 20              | 30 | 2 | 1 - 25mm <sup>2</sup> | 1 - 15mm <sup>2</sup> | 20 mm Ø PVC |
| 10                   | EXISTING                     | 230  | 1800  | 4.35             | 20              | 30 | 2 | 1 - 25mm <sup>2</sup> | 1 - 15mm <sup>2</sup> | 20 mm Ø PVC |
| 11                   | EXISTING                     | 230  | 2000  | 4.35             | 20              | 30 | 2 | 1 - 25mm <sup>2</sup> | 1 - 15mm <sup>2</sup> | 20 mm Ø PVC |
| 12                   | EXISTING                     | 230  | 1800  | 4.35             | 20              | 30 | 2 | 1 - 25mm <sup>2</sup> | 1 - 15mm <sup>2</sup> | 20 mm Ø PVC |
| 13                   | EXISTING                     | 230  | 2000  | 4.35             | 20              | 30 | 2 | 1 - 25mm <sup>2</sup> | 1 - 15mm <sup>2</sup> | 20 mm Ø PVC |
| 14                   | EXISTING                     | 230  | 2000  | 4.35             | 20              | 30 | 2 | 1 - 25mm <sup>2</sup> | 1 - 15mm <sup>2</sup> | 20 mm Ø PVC |
| 15                   | EXISTING                     | 230  | 2000  | 4.35             | 20              | 30 | 2 | 1 - 25mm <sup>2</sup> | 1 - 15mm <sup>2</sup> | 20 mm Ø PVC |
| 16                   | EXISTING                     | 230  | 2000  | 4.35             | 20              | 30 | 2 | 1 - 25mm <sup>2</sup> | 1 - 15mm <sup>2</sup> | 20 mm Ø PVC |
| 17                   | EXISTING                     | 230  | 2000  | 4.35             | 20              | 30 | 2 | 1 - 25mm <sup>2</sup> | 1 - 15mm <sup>2</sup> | 20 mm Ø PVC |
| 18                   | EXISTING                     | 230  | 1800  | 4.35             | 20              | 30 | 2 | 1 - 25mm <sup>2</sup> | 1 - 15mm <sup>2</sup> | 20 mm Ø PVC |
| 19                   | EXISTING                     | 230  | 1800  | 4.35             | 20              | 30 | 2 | 1 - 25mm <sup>2</sup> | 1 - 15mm <sup>2</sup> | 20 mm Ø PVC |
| 20                   | EXISTING                     | 230  | 1800  | 4.35             | 20              | 30 | 2 | 1 - 25mm <sup>2</sup> | 1 - 15mm <sup>2</sup> | 20 mm Ø PVC |
| 21                   | EXISTING                     | 230  | 1800  | 4.35             | 20              | 30 | 2 | 1 - 25mm <sup>2</sup> | 1 - 15mm <sup>2</sup> | 20 mm Ø PVC |
| 22                   | EXISTING                     | 230  | 1800  | 4.35             | 20              | 30 | 2 | 1 - 25mm <sup>2</sup> | 1 - 15mm <sup>2</sup> | 20 mm Ø PVC |
| 23                   | R - TROUBLE S. POWER (NEW)   | 230  | 400   | 1.80             | 20              | 30 | 2 | 1 - 25mm <sup>2</sup> | 1 - 15mm <sup>2</sup> | 20 mm Ø PVC |
| 24                   | R - CONVENIENCE OUTLET (NEW) | 230  | 900   | 3.91             | 20              | 30 | 2 | 1 - 25mm <sup>2</sup> | 1 - 15mm <sup>2</sup> | 20 mm Ø PVC |
| 25                   | 1.5 HP ACU (NEW)             | 230  | 3300  | 14.35            | 20              | 30 | 2 | 1 - 25mm <sup>2</sup> | 1 - 15mm <sup>2</sup> | 20 mm Ø PVC |
| 26                   | 1.5 HP ACU (NEW)             | 230  | 3300  | 14.35            | 20              | 30 | 2 | 1 - 25mm <sup>2</sup> | 1 - 15mm <sup>2</sup> | 20 mm Ø PVC |
| TOTAL CONNECTED LOAD |                              |      | 21900 | 184.00           |                 |    |   |                       |                       |             |

## CIRCUIT PROTECTION COMPUTATION:

$$I_L = (23020 / 230V) + 25(100) 1.25\%$$

$$I_L = 133.125 \text{ AMPERE}$$

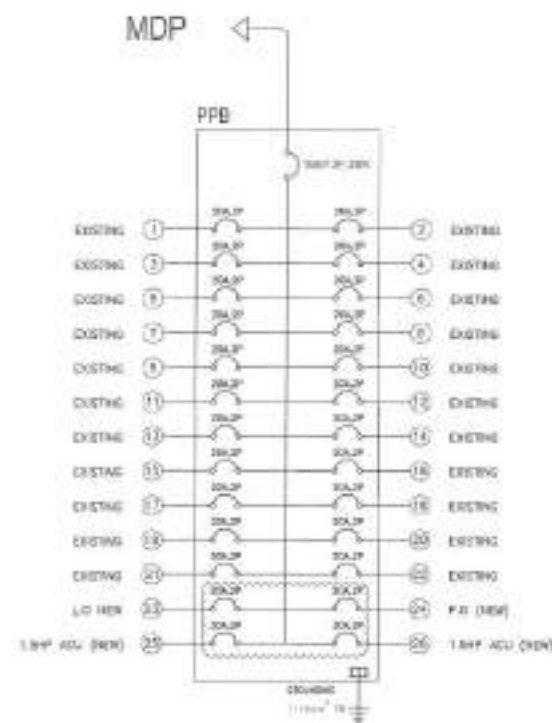
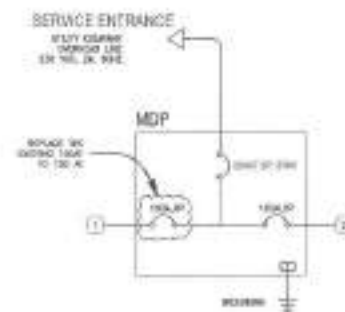
## OVER CURRENT PROTECTION:

USE 150 AT, 2P CIRCUIT-BK

## MAIN FEEDER:

USE 1 - 30mm<sup>2</sup> 110V WIRE & 1 - 14mm<sup>2</sup> 110V GROUND WIRE

IN 40mm Ø IMC TYPE



## 1 LOAD SCHEDULE

SCALE: NTS

## 4 RISER DIAGRAM

SCALE: NTS



Republikang Pilipinas  
Lungsod ng Quezon  
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:

PROPOSED CONSTRUCTION OF  
HAND WASHING FACILITY AND  
REHABILITATION OF BARANGAY  
COMPLEX DAYCARE CENTER

LOCATION:  
BARANGAY HOLY SPIRIT DISTRICT 3, QUEZON CITY

DRAWN BY: JEB

DATE: AUG 06, 2021

CHECKED BY: JEB

REVISION NO.: 1

DESIGNED BY:

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

RECOMMENDING OFFICIAL:

ENGR. MARGAN R. VERZOSA, JR.  
CH. CITY ENGINEERING DEPARTMENT

APPROVED BY:

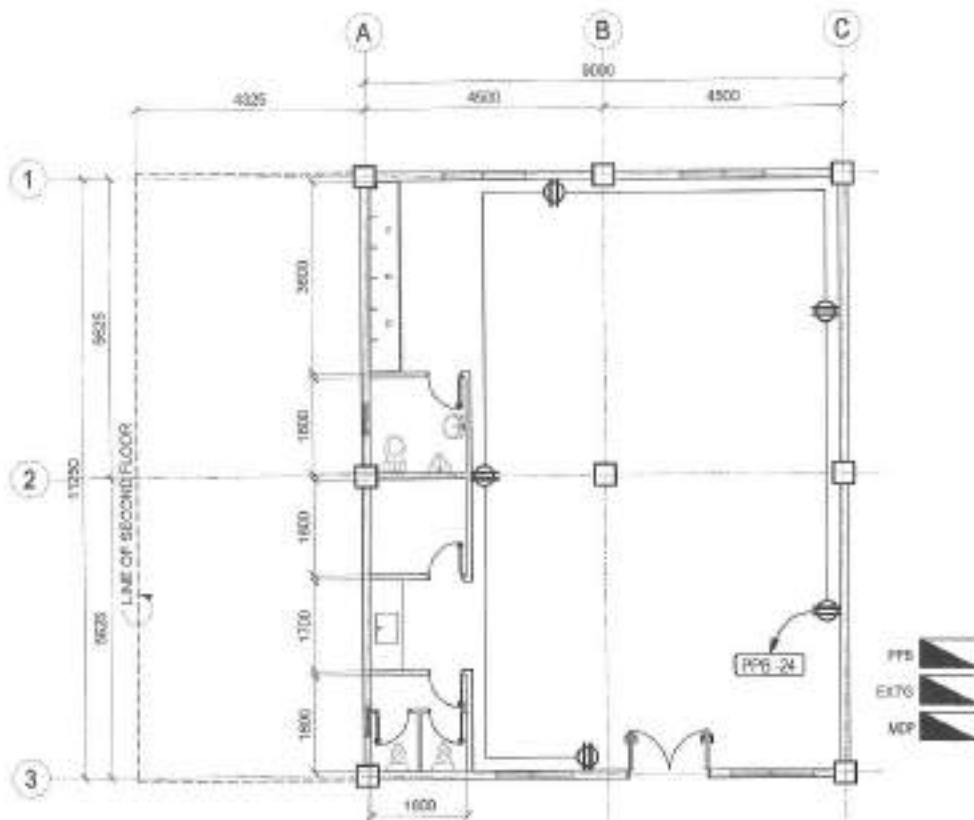
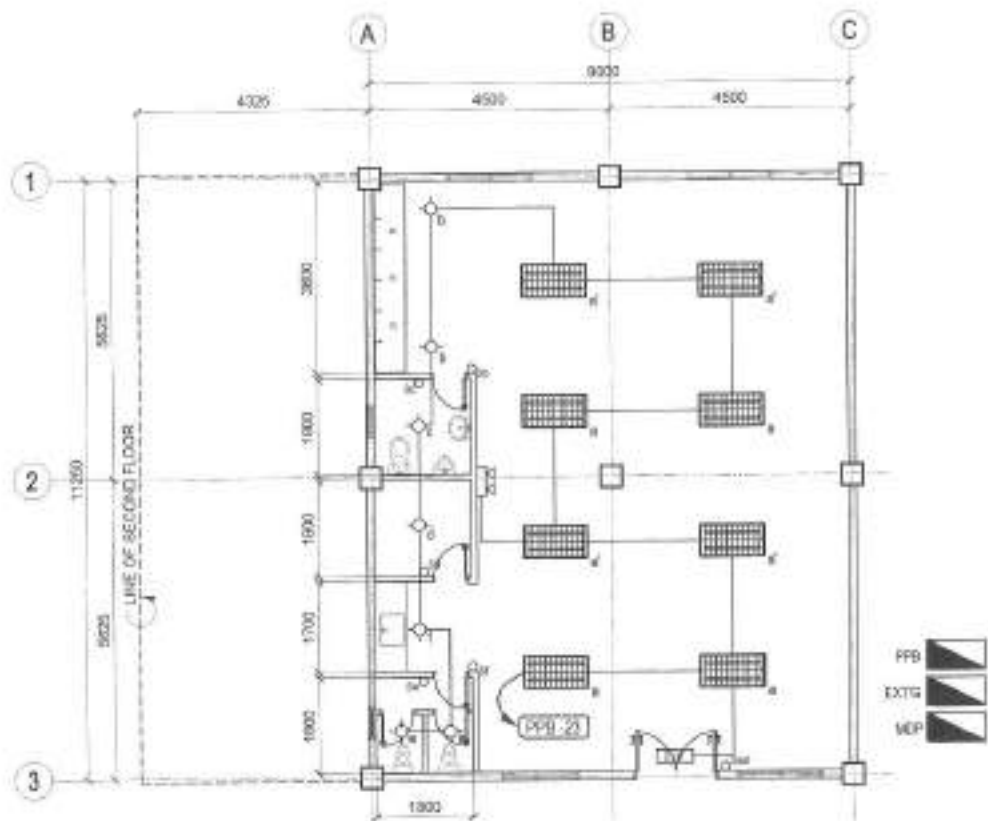
HON. RA. JOSEFINA G. BELMONTE  
CITY MGR., SECTION 3

SHEET CONTENT:

LOAD SCHEDULE  
RISER DIAGRAM

SHEET NO.:

EL-02  
12/13



**1 LIGHTING LAYOUT**

SCALE 1:100 MTS

**2 POWER LAYOUT**

SCALE 1:100 MTS



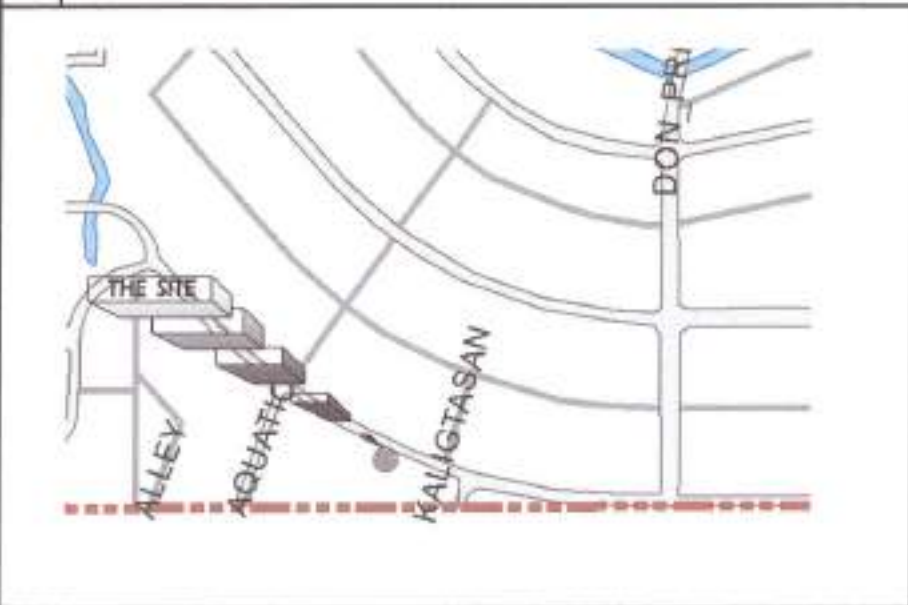
Republika ng Pilipinas  
Lungsod ng Quezon  
**CITY ENGINEERING DEPARTMENT**

|   |                 |  |   |  |   |                                     |
|---|-----------------|--|---|--|---|-------------------------------------|
| PROJECT TITLE:<br><b>PROPOSED CONSTRUCTION OF<br/>HAND WASHING FACILITY AND<br/>REHABILITATION OF BARANGAY<br/>COMPLEX DAYCARE CENTER</b> | DRAWN BY: DMC   | SUBMITTED BY:<br>  | RECOMMENDING APPROVAL:<br>  | APPROVED BY:<br>   | SHEET CONTENT:<br>LIGHTING LAYOUT<br>POWER LAYOUT | SHEET NO:<br><b>EL-03<br/>13/13</b> |
| DATE: MAR 06 2021   | CHECKED BY: JAH | ENGR. LEO S. DEL ROSARIO<br>HEAD, PLANNING PROGRAMS DIVISION | ENGR. WILLIAM R. VERDESA, JR.<br>D.C. CITY ENGINEERING DEPARTMENT | HON. MA. JOSEFINA G. DELMONTÉ<br>CITY MAYOR, QUEZON CITY |   |                                     |
| LOCATION:<br>BARANGAY HOLY SPIRIT DISTRICT 3, QUEZON CITY   | REVISION NO.: 1 |  |   |  |   |                                     |

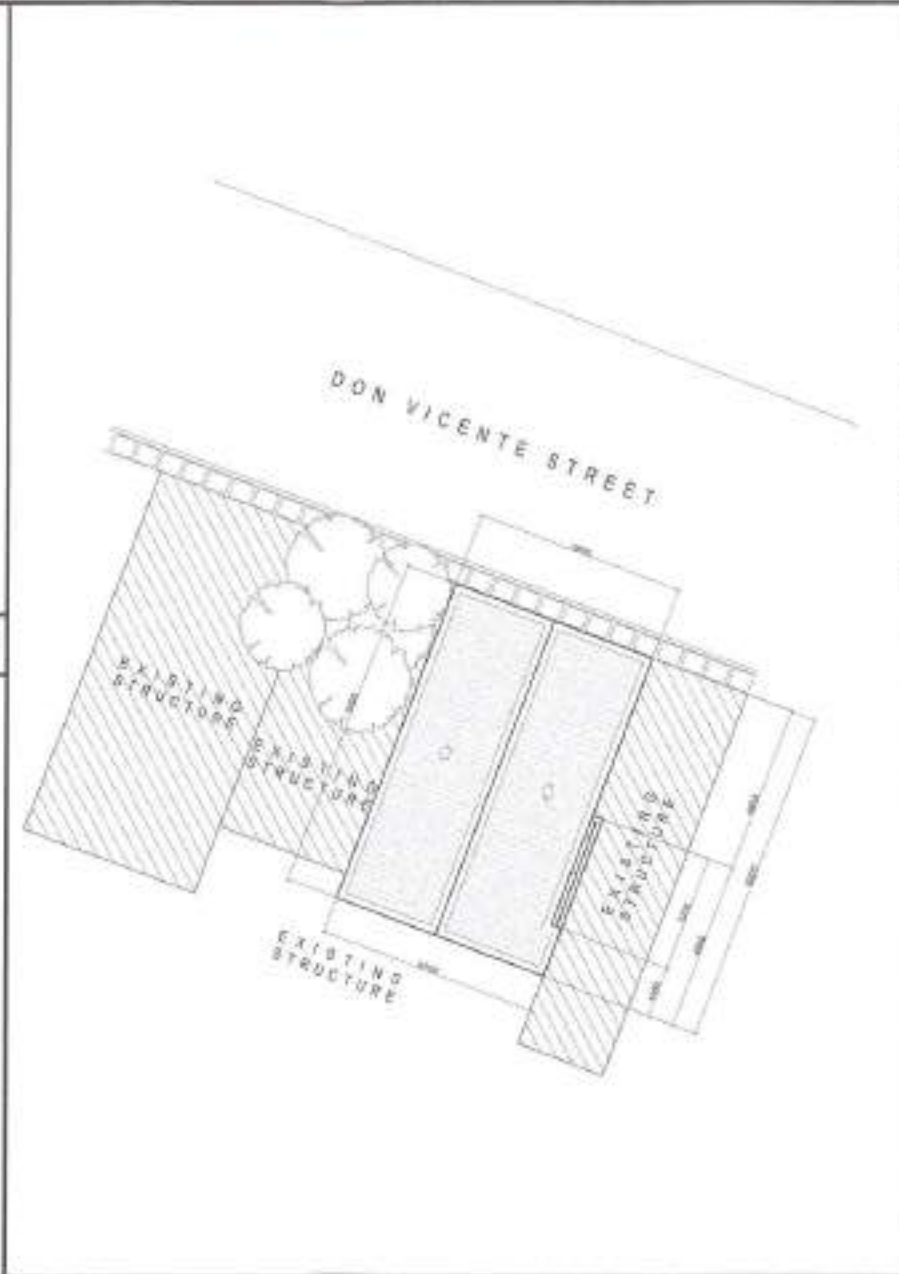




**1 VICINITY MAP** SCALE : NOT TO SCALE



**2 LOCATION MAP** SCALE : NOT TO SCALE



**3 SITE DEVELOPMENT PLAN** SCALE : 1:160 MTS

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 Republika ng Pilipinas  
 Lungsod ng Quezon  
**CITY ENGINEERING DEPARTMENT**

**PROJECT TITLE:**  
 PROPOSED CONSTRUCTION OF HAND  
 WASHING FACILITY AND  
 REHABILITATION OF KALIGTASAN DAY  
 CARE CENTER

**LOCATION:**  
 BARANGAY HOLY SPIRIT, DISTRICT 2, QUEZON CITY


**DRAWN BY:** JCS  
**SCALE:** 0:0:00  
**DESIGNED BY:** JCS  
**REVISIONS:**

**SUBMITTED BY:**  
  
**ENGR. LEO S. DEL ROSARIO**  
 REG. PROFESSIONAL ENGINEER

**RECOMMENDING APPROVAL:**  
  
**ENGR. ISAGANI R. VERZOSA, JR.**  
 REG. PROFESSIONAL ENGINEER

**APPROVED BY:**  
  
**HON. MA. JOSEFINA G. BELMONTE**  
 CITY ENGINEER, QUEZON CITY

**SHEET CONTENT:**  
 VICINITY MAP,  
 LOCATION MAP,  
 SITE DEVELOPMENT PLAN

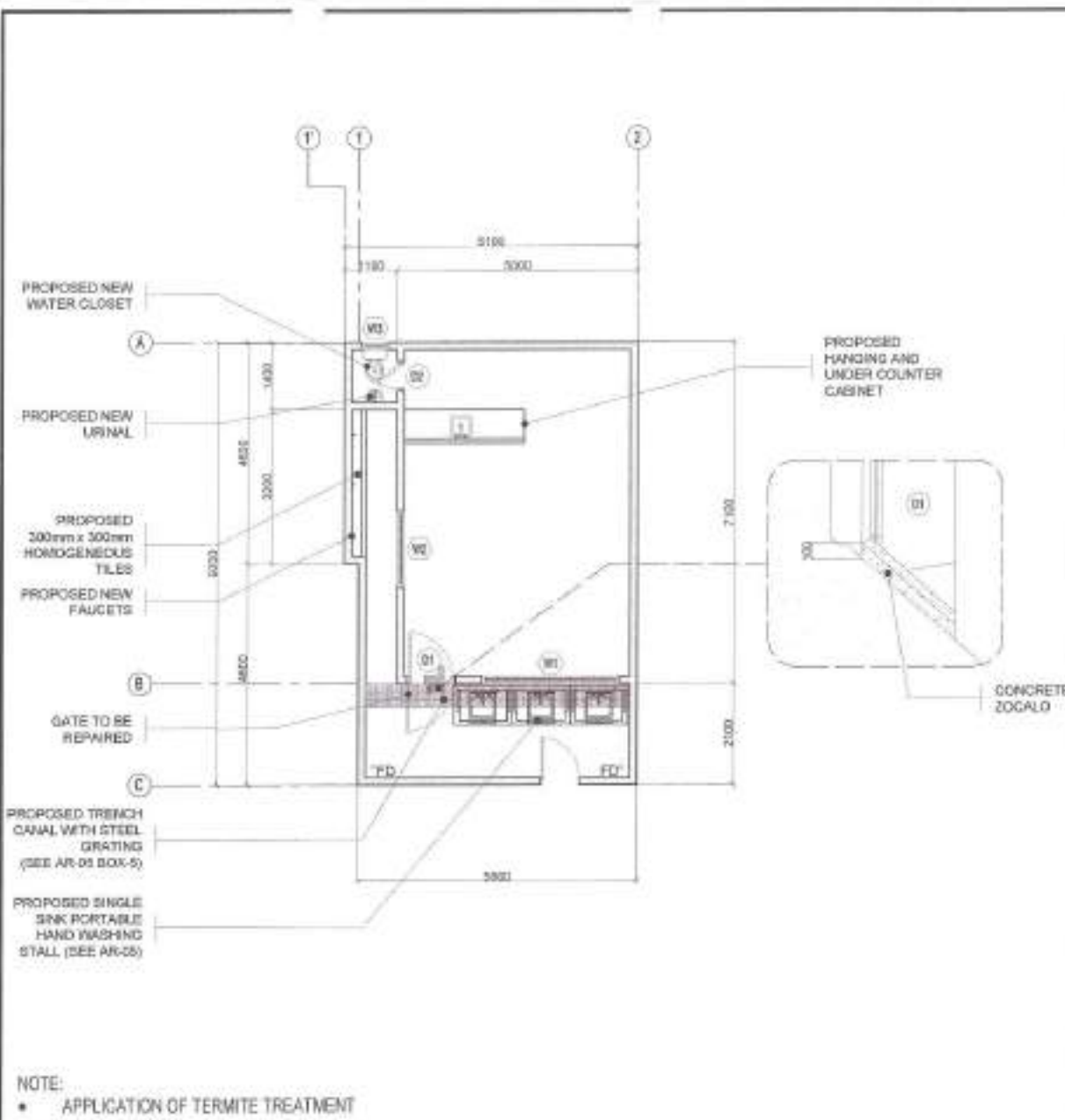
**SHEET NO.**  



**1 HAND WASHING PERSPECTIVE**

SCALE : NOT TO SCALE

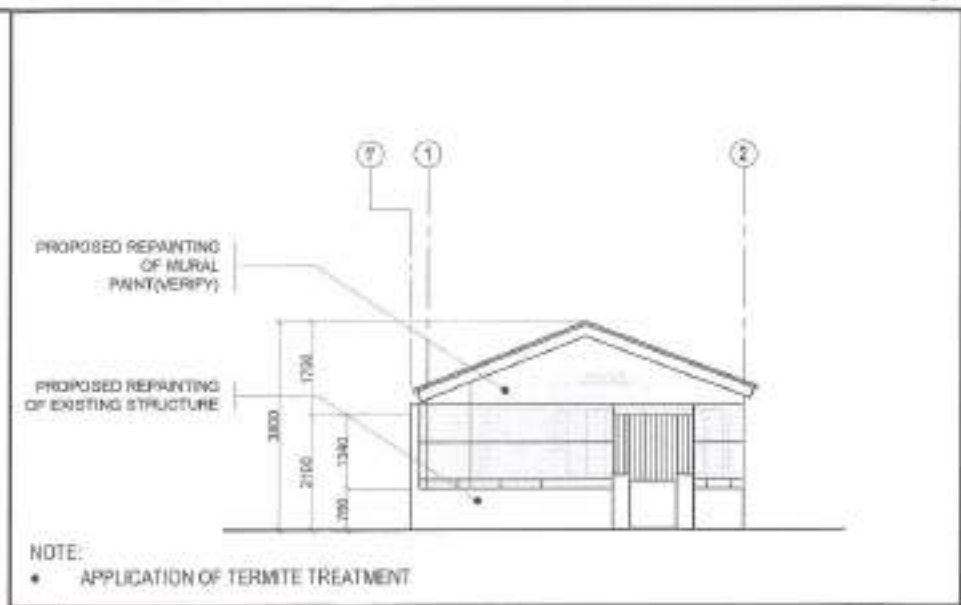

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**CITY ENGINEERING DEPARTMENT**

| PROJECT TITLE:  | DESIGNED BY:                       | SUBMITTED BY:  | RECOMMENDING APPROVAL:  | APPROVED BY:   | SHEET CONTENT            | SHEET NO.                    |
|---|------------------------------------|--|---|--|--------------------------|------------------------------|
| <b>PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF KALIGTASAN DAY CARE CENTER</b><br>LOCATION: BAYANGAY HOLY SPIRIT, DISTRICT 2, QUEZON CITY | DATE: 04/20/2023<br>CHECKED BY: JW | <br><b>ENGR. LEO S. DEL ROSARIO</b><br><small>HEAD, PLANNING &amp; REGULATORY DIVISION</small> | <br><b>ENGR. SAGANI R. VERZOSA, JR.</b><br><small>CC-OTY ENGINEERING DEPARTMENT</small> | <br><b>HON. MA. JOSEFINA G. BELMONTE</b><br><small>CITY MAYOR, QUEZON CITY</small> | HAND WASHING PERSPECTIVE | <b>AR-02</b><br><b>02/11</b> |



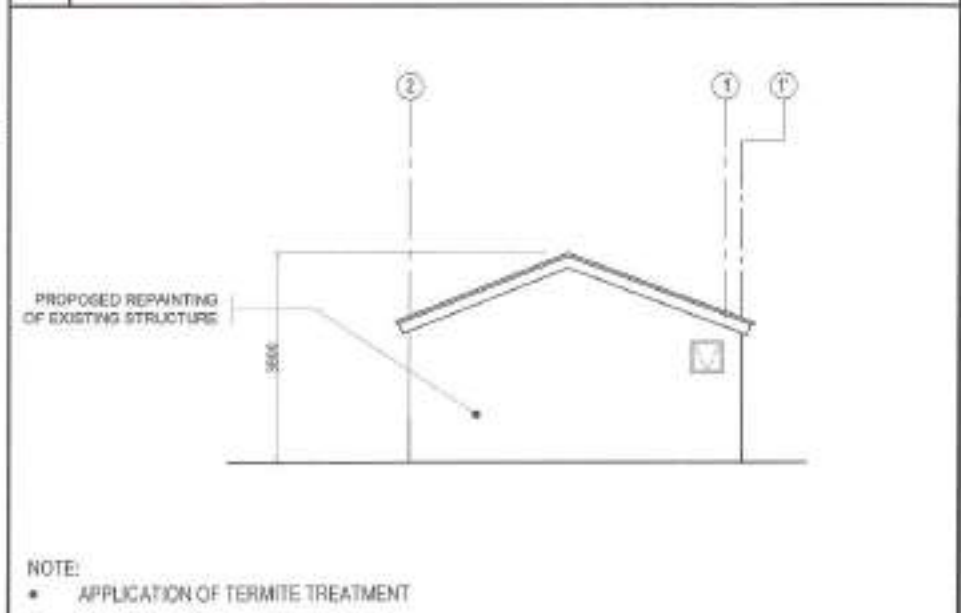
**1 FLOOR PLAN**

SCALE: 1:100 MTS



**2 FRONT ELEVATION**

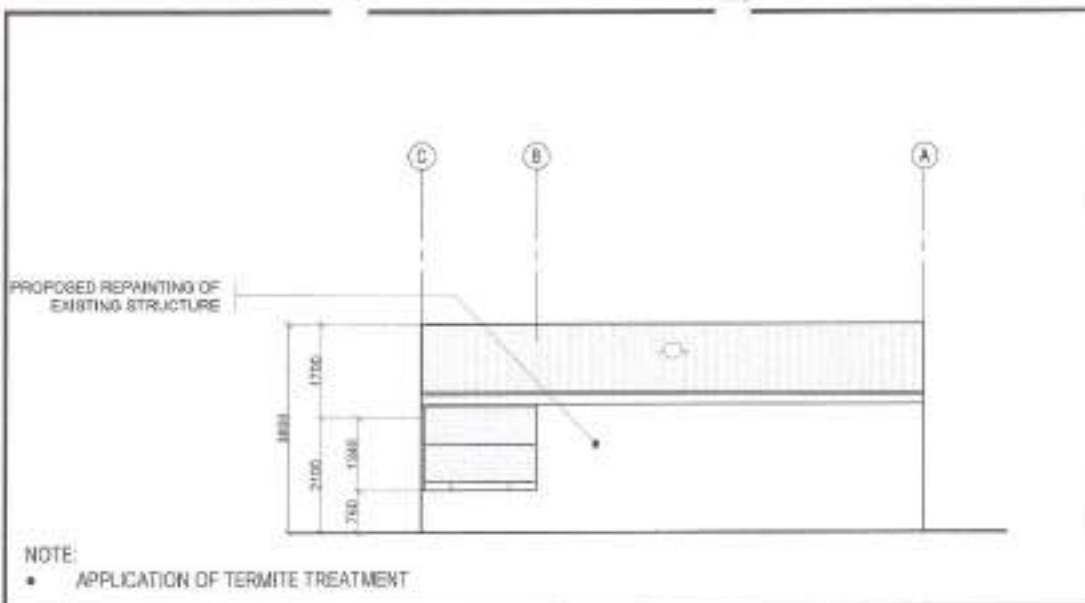
SCALE: 1:100 MTS



**3 REAR ELEVATION**

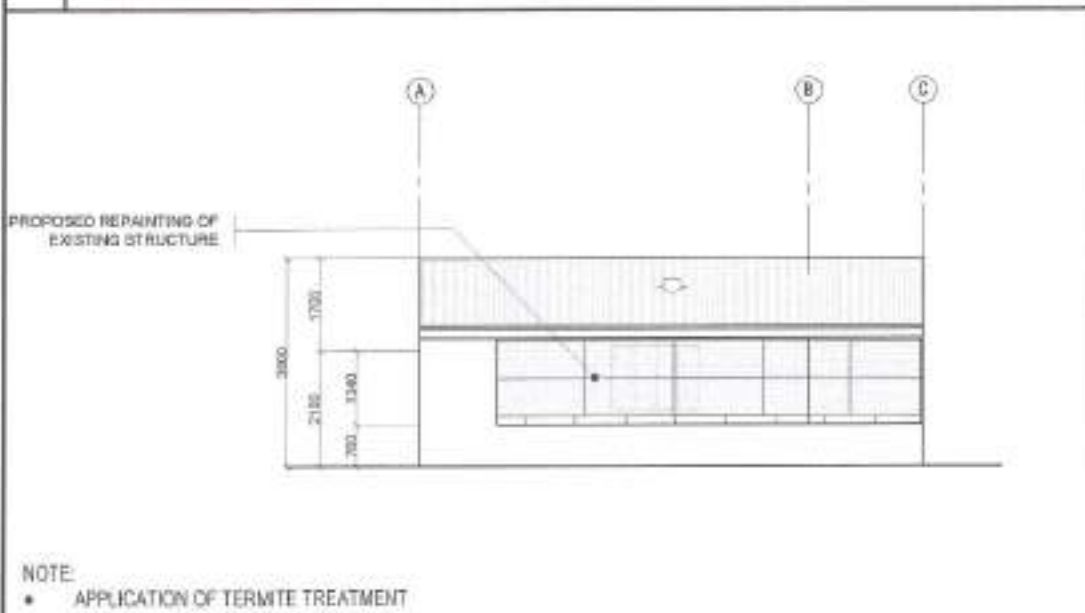
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|  |   |                  |               |  |  |   |                  |
|--|---|------------------|---------------|--|--|---|------------------|
| <p>Republika ng Pilipinas<br/>Lungsod ng Quezon<br/><b>CITY ENGINEERING DEPARTMENT</b></p> | PROJECT TITLE:  | DRAWN BY:        | SUBMITTED BY: | RECOMMENDING APPROVAL:                             | APPROVED BY:   | SHEET CONTENT   | SHEET NO.        |
|  | PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF KALIGTASAN DAY CARE CENTER | DATE: 01.02.2011 |               |  |  | FLOOR PLAN<br>FRONT ELEVATION<br>REAR ELEVATION             | AR-03<br>03   11 |
|  | LOCATION: BARANGAY HOLY SPIRIT, DISTRICT 2, QUEZON CITY   | DESIGNED BY:     | REVISION NO.: | ENGR. LEO S. DEL ROSARIO<br>HEAD, PLUMBING SECTION | ENGR. ISAGANI R. VERZOSA, JR.<br>CHIEF, PLUMBING SECTION | HON. MA. JOSEFINA G. BELMONTE<br>CITY ENGINEER, QUEZON CITY |                  |



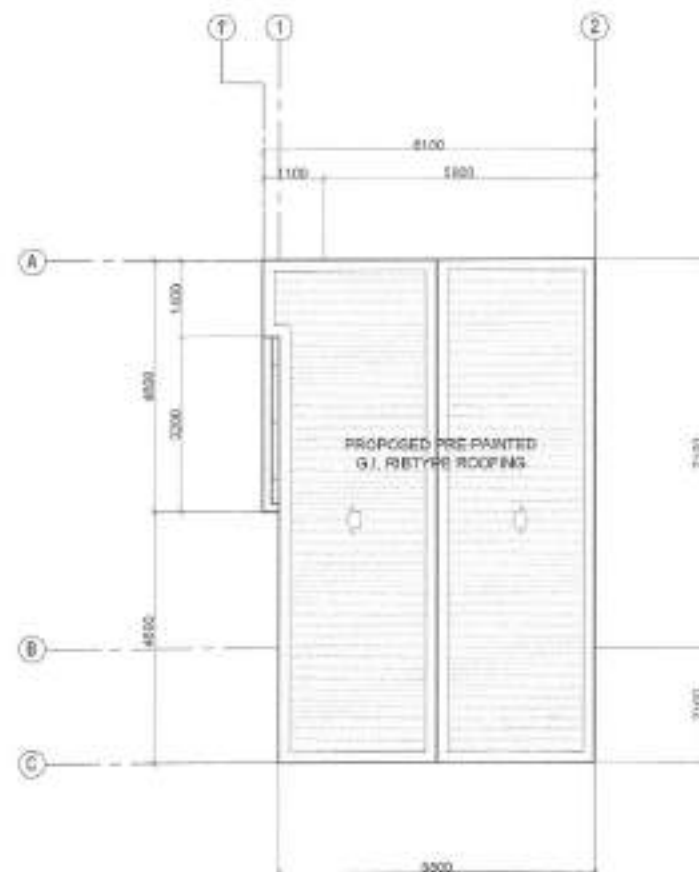
**1 RIGHT ELEVATION**

SCALE: 1:100 MTS



**2 LEFT ELEVATION**

SCALE: 1:100 MTS

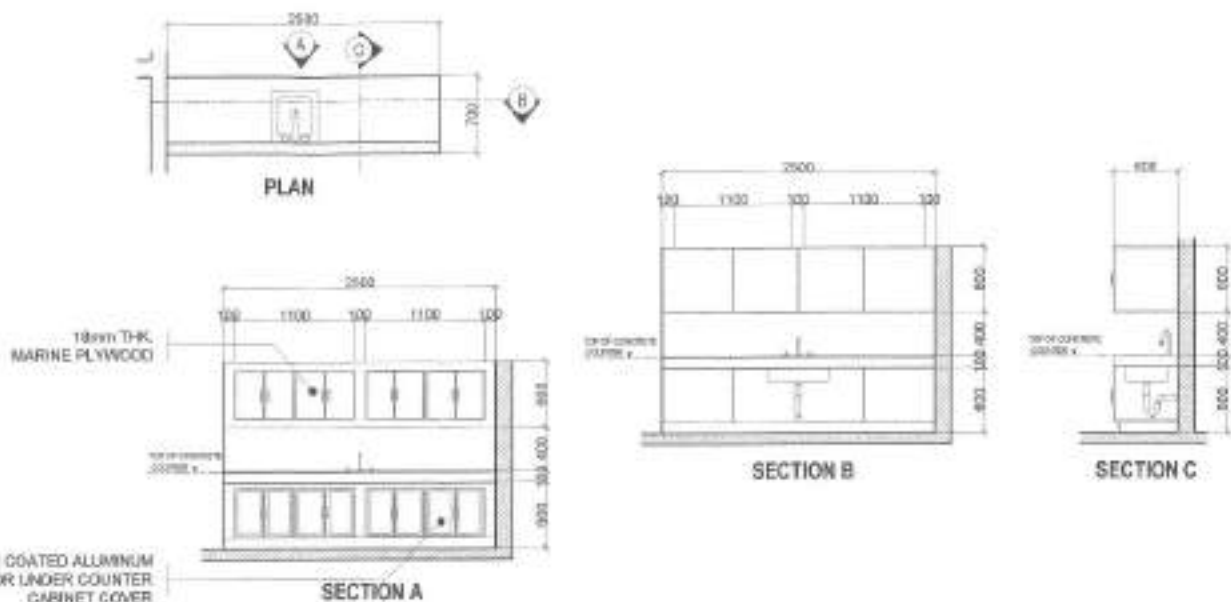
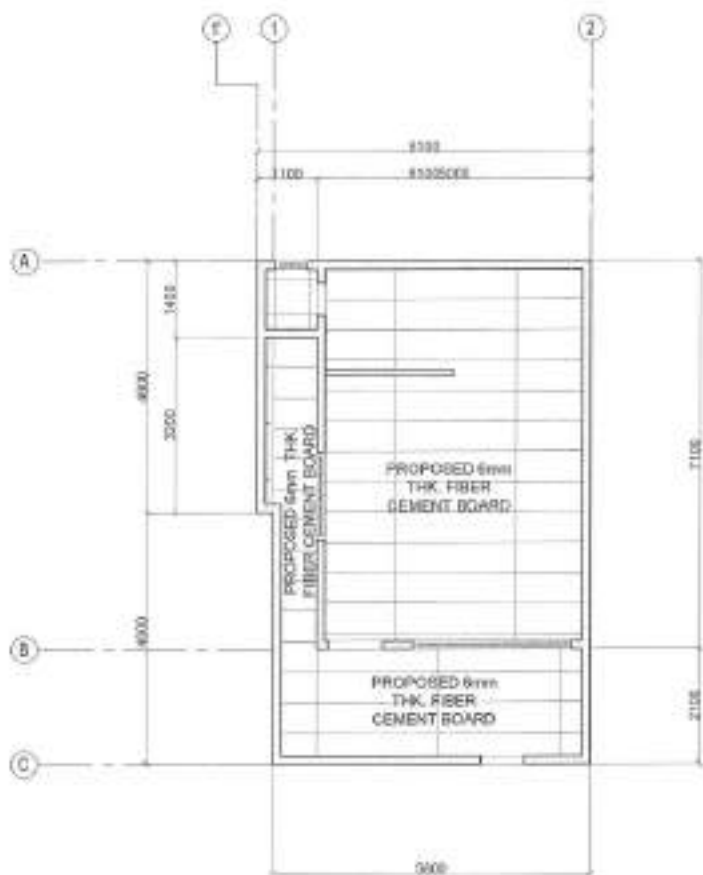


**3 ROOF PLAN**

SCALE: 1:100 MTS

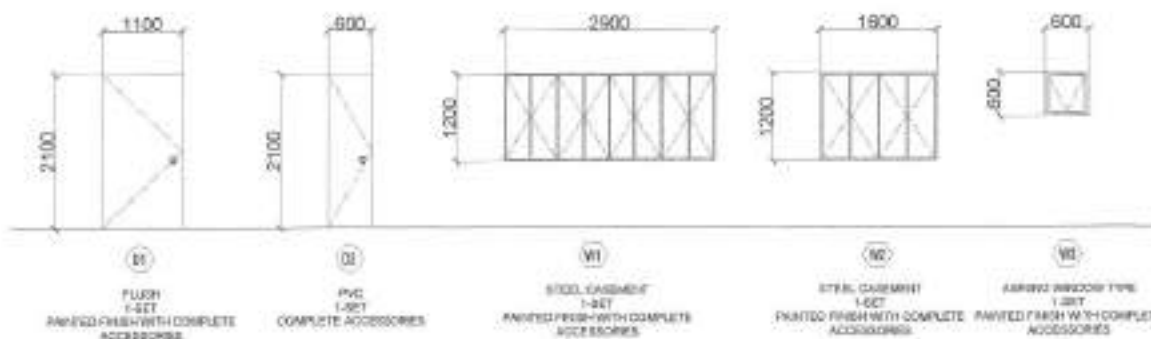
|  |   |                 |   |  |   |  |                  |
|--|---|-----------------|---|--|---|--|------------------|
| <p>Republika ng Pilipinas<br/>Lungsod ng Quezon<br/><b>CITY ENGINEERING DEPARTMENT</b></p> | PROJECT TITLE:  | DRAWN BY: JCS   | SUBMITTED BY:   | RECOMMENDING APPROVAL:                               | APPROVED BY:  | SHEET CONTENT                                  | SHEET NO.        |
|  | PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF KALIGTASAN DAY CARE CENTER | SITE: 00/00     |   |  |   | RIGHT ELEVATION<br>LEFT ELEVATION<br>ROOF PLAN | AR-04<br>04   11 |
|  | OFFICE: BARANGAY HOLY SPIRIT, DISTRICT 2, QUEZON CITY   | DESIGNED BY: JM | ENGR. LEO S. DEL ROSARIO<br>REG. PLANNER & PERMITS DIVISION | ENGR. ISAGANI R. VERZOSA, JR.<br>REG. CIVIL ENGINEER | HON. MA. JOSEFINA G. BELMONTE<br>CITY ENGINEER, QUEZON CITY |  |                  |





**2 CABINET DETAIL**

SCALE : 1 : 30 MTS



**3 SCHEDULE OF DOORS AND WINDOWS**

SCALE : 1 : 75 MTS

**1 REFLECTED CEILING PLAN**

SCALE : 1 : 100 MTS



Republika ng Pilipinas  
Lungsod ng Quezon  
**CITY ENGINEERING DEPARTMENT**

PROJECT TITLE:  
**PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF KALIGTASAN DAY CARE CENTER**  
LOCATION:  
BARANGAY HOLY SPIRIT, DISTRICT 2, QUEZON CITY

DRAWN BY: JCS  
DATE ISSUED:  
CHECKED BY: JCS  
REVISION NO.:

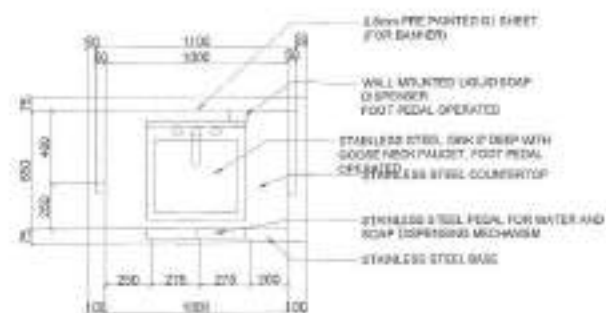
SUBMITTED BY:  
*[Signature]*  
**ENGR. LEO S. DEL ROSARIO**  
MUT. PLANNING & POLYTECHNIC CENTER

RECOMMENDING APPROVAL:  
*[Signature]*  
**ENGR. ISAGANI R. VERZOSA, JR.**  
CC, CITY ENGINEERING DEPARTMENT

APPROVED BY:  
*[Signature]*  
**HON. MA. JOSEFINA G. BELMONTE**  
CITY MAYOR, QUEZON CITY

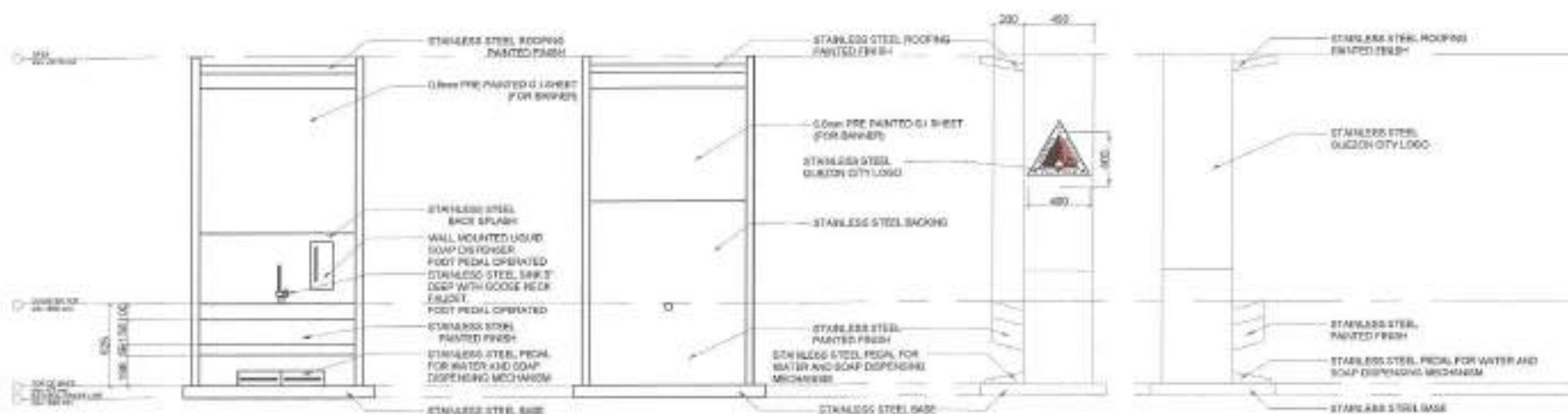
SHEET CONTENT:  
REFLECTED CEILING PLAN  
SCHEDULE OF DOORS  
AND WINDOWS

SHEET NO.  
**AR-05**  
**05/11**



1 SINGLE SINK PORTABLE HAND WASHING STALL PLAN

SCALE : 1 : 30 MTS



1 ELEVATIONS

SCALE : 1 : 30 MTS



Republika ng Pilipinas  
Lungsod ng Quezon  
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:  
**PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF KALIGTASAN DAY CARE CENTER**  
LOCATION: BARANGAY HOLY SPIRIT, DISTRICT 3, QUEZON CITY

DATE: 06/25/21  
DESIGNED BY: JAV  
REVISION NO.:

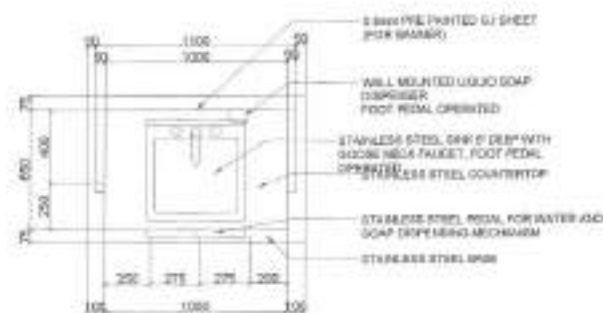
SUBMITTED BY:  
  
ENGR. LEO S. DEL ROSARIO  
REG. PLANNER & PROJECT MANAGER ENGINEER

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

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

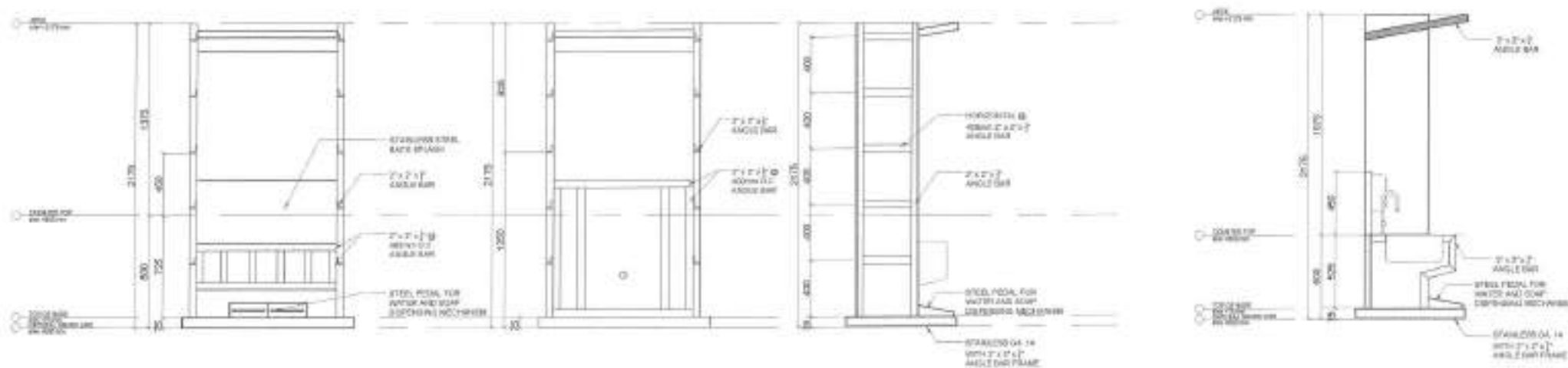
SHEET CONTENT:  
SINGLE SINK PORTABLE HAND WASHING STALL PLAN ELEVATIONS

SHEET NO.:  
AR-06  
06 | 11



1 SINGLE SINK PORTABLE HAND WASHING STALL PLAN

SCALE : 1 : 30 MTS



2 ELEVATIONS

SCALE : 1 : 30 MTS

|   |   |                  |  |  |                               |   |                |
|---|---|------------------|--|--|-------------------------------|---|----------------|
| <p>Republika ng Pilipinas<br/>Lungsod ng Quezon<br/>CITY ENGINEERING DEPARTMENT</p> | PROJECT TITLE:  | DESIGNED BY:     | SUBMITTED BY:  | RECOMMENDING APPROVAL:                                 | APPROVED BY:                  | SHEET CONTENT   | SHEET NO.      |
|   | PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF KALIGTASAN DAY CARE CENTER | DATE: 06/01/2024 |  |  | HON. MA. JOSEFINA G. BELMONTE | SINGLE SINK PORTABLE HAND WASHING STALL PLAN ELEVATIONS | ST-01<br>07/11 |
|   | LOCATION: BIRANGAY HOLY SPIRIT, DISTRICT 2, QUEZON CITY   | REVISIONS:       | ENGR. LEO S. DEL ROSARIO<br>HEAD PLANNING PROGRAMS GROUP | ENGR. ISAGANI R. VERZOSA, JR.<br>DEPUTY CHIEF ENGINEER | CITY ENGINEER                 |   |                |

- ALL THE PLUMBING/SANITARY WORKS INCLUDED HEREIN SHALL BE EXECUTED ACCORDING TO THE PROVISIONS OF THE PHILIPPINE PLUMBING CODE, THE NATIONAL BUILDING CODE, RULES AND REGULATION OF QUEZON CITY.
- COORDINATE THE DRAWINGS WITH OTHER RELATED DRAWINGS AND SPECIFICATION REQUIRED. THE ENGR./ARCH. SHALL BE NOTIFIED IMMEDIATELY OF ANY DISCREPANCY FOUND THEREIN.
- ALL PIPES SHALL BE INSTALLED AS INDICATED ON PLANS. ANY RELOCATION REQUIRED FOR PROPER EXECUTION OF OTHER TRADES SHALL BE WITH PRIOR APPROVAL OF THE ENGINEER OR ARCHITECT.
- PROPOSED SANITARY UTILITIES SHALL BE CONFORM TO THE ACTUAL LOCATION, DEPTH, AND INVERT ELEVATION OF ALL EXISTING STRUCTURES AND PIPES AS VERIFIED BY THE CONTRACTOR.
- ALL SLOPES FOR HORIZONTAL DRAINAGE SHALL MAINTAIN 1% MIN. UNLESS OTHERWISE SPECIFIED.
- SIZES OF WATER SUPPLY PIPES TO FIXTURES SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTION.
- THE CONTRACTOR SHALL VERIFY ALL EXISTING UTILITIES AT SITE AND COORDINATE THE WORKS WITH THE SEWER LINE EFFLUENT DISPOSAL POINT AND WATER LINE SERVICE CONNECTING POINT.
- ALL WATER PIPE AND WATER TANKS SHALL BE THOROUGHLY FLUSHED AND DISINFECTED WITH LIQUID CHLORINE OR HYDROCHLORIDE SOLUTION.
- ALL WATER PIPES SHALL BE HYDROSTATICALLY TESTED TO A PRESSURE 1.10 THE DESIGNED WORKING PRESSURE OF THE SYSTEM.
- ALL SANITARY AND STORM DRAINAGE PIPES SHALL BE HYDROSTATICALLY TESTED AT LEAST 3.0 MTS. HEAD TO ENSURE THAT THE SYSTEM ARE WATER TIGHT.
- ALL DIMENSIONS ARE IN METERS AND ALL PIPES SIZES ARE IN MILLIMETER UNLESS OTHERWISE SPECIFIED.
- ALL PIPES INDICATED ON PLANS REFER TO PIPES INSIDE DIAMETER.

## 1 GENERAL NOTES SCALE: NOT TO SCALE

### I. SEWER/WASTE AND VENT SYSTEM

|  |          |                                    |
|--|----------|------------------------------------|
|    | SP / WP  | - SOIL PIPE / WASTE PIPE           |
|    | VP / VAC | - VENT PIPE / VENT AT CEILING      |
|    | DP       | - STORM DRAIN PIPE                 |
|    | FGD/GCD  | - FLOOR CLEANOUT / GROUND CLEANOUT |
|    | CCO      | - CEILING CLEAN-OUT                |
|    | DS       | - DRAINAGE STACK / DOWNSPOUT       |
|    | VSTR     | - VENT STACK/EXTENDED THROUGH ROOF |
|    | SS       | - SOIL STACK                       |
|   | FD       | - FLOOR DRAIN                      |
|  | CB       | - CATCH BASIN                      |
|  | AD       | - AREA DRAIN                       |
|  |          | - STALL TYPE URINAL                |
|  | GT       | - GREASE TRAP                      |

### II. WATER DISTRIBUTION SYSTEM:

|  |     |                    |
|--|-----|--------------------|
|  | CWL | - COLD WATER LINE  |
|  | CWR | - COLD WATER RISER |
|  | GV  | - GATE VALVE       |
|  | CV  | - CHECK VALVE      |
|  | WM  | - WATER METER      |
|  | SD  | - BALCONY DRAIN    |

## 2 LEGENDS AND SYMBOLS



Republika ng Pilipinas  
Lungsod ng Quezon  
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:  
**PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF KALIGTASAN DAY CARE CENTER**

DATE: 08/08/2021  
CHECKED BY: [Signature]  
REVISION NO.: [Blank]

LOCATION: BARANGAY HOLY SPIRIT, DISTRICT 2, QUEZON CITY

DATE: 08/08/2021  
CHECKED BY: [Signature]  
REVISION NO.: [Blank]

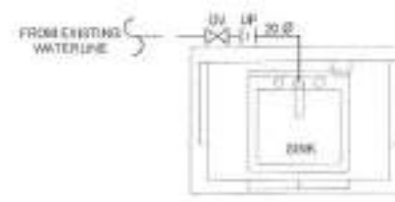
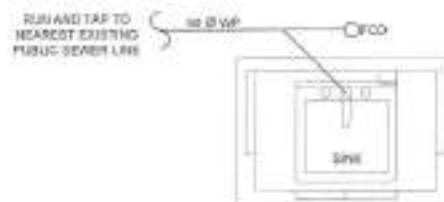
SUBMITTED BY:  
[Signature]  
**ENGR. LEO S. DEL ROSARIO**  
REG. PLUMBING & MECHANICAL ENGINEER

RECOMMENDING APPROVAL:  
[Signature]  
**ENGR. ISAGAN R. VERZOSA, JR.**  
REG. CIVIL ENGINEERING SUPERVISOR

APPROVED BY:  
[Signature]  
**HON. MA. JOSEFINA G. BELMONTE**  
CITY ENGINEER, QUEZON CITY

SHEET CONTENT:  
GENERAL NOTES  
LEGENDS AND SYMBOLS  
SINGLE SINK PORTABLE HAND WASHING SANITARY LINE  
SINGLE SINK PORTABLE HAND WASHING WATER LINE

SHEET NO.  
**PL-01**  
08/11



## 3 SINGLE SINK PORTABLE HAND WASHING SANITARY LINE SCALE: 1:30 MTS

## 4 SINGLE SINK PORTABLE HAND WASHING WATER LINE SCALE: AS NOTED TO DETAILS



**GENERAL NOTES:**

- ALL ELECTRICAL WORK SHALL BE DONE IN ACCORDANCE WITH THE PROVISIONS OF THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE, THE LAWS AND ORDINANCES OF THE LOCAL CODES INCLUDING ALL ORDINANCES AND THE REQUIREMENTS OF THE LOCAL POWER AND TELEPHONE UTILITY COMPANY.
- THE CONTRACTOR SHALL SECURE ALL PERMITS AND PAY ALL FEES REQUIRED FORTHWITH AND SHALL FURNISH THE OWNER THROUGH THE ENGINEER WITH COPIES OF ELECTRICAL PERMITS AND APPROVAL FROM POWER SUPPLYING AUTHORITY FOR COMPLETION OF WORK.
- ALL EXPOSED BRANCH CIRCUITS SHALL BE PVC CONDUITS AND FOR EXPOSED INSTALLATIONS SHALL BE IN CONFORMANCE WITH THE NATIONAL ELECTRICAL CODE.
- ALL WIRING SHALL BE PROVIDED BY THE CONTRACTOR UNLESS OTHERWISE SPECIFIED BY THE ARCHITECT. ALL WIRING SHALL BE INSTALLED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE. ALL WIRING SHALL BE INSTALLED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE. ALL WIRING SHALL BE INSTALLED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE.
- ALL POWER OUTLETS AND SWITCHES SHALL BE GROUNDING TYPE WITH FINISHED GROUNDING (20 V).
- GROUNDING AND FAULT CURRENT INTERRUPTER (GFCI) BREAKERS FOR LOADS MARKED "GFCI" ON THE PANEL SHALL BE INSTALLED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE.
- ALL METAL ENCLOSURES, CABINETS AND EQUIPMENT SHALL BE PROPERLY GROUNDING AND BONDING.
- UNLESS OTHERWISE NOTED, ALL WIRING SHALL BE INSTALLED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE.

RECEPTACLE OUTLET - 500 MM AMP, 0.75 MM ABOVE WORKING SURFACE  
 TELEPHONE OUTLET - 500 MM AMP  
 GFI OUTLET - 500 MM AMP  
 LIGHTING SWITCH - 500 MM AMP  
 PANEL BOARD - 500 MM AMP

- REFER TO THE MANUAL, PLUMBING AND THE PROTECTION DRAWINGS FOR THE LOCATION OF THE EQUIPMENT AS WELL AS THEIR GENERAL DIMENSIONS TO BE PROVIDED AND TO BE SHOWN UNDER THEIR RESPECTIVE SECTIONS.
- ALL MATERIALS TO BE USED SHALL BE OF THE BEST QUALITY, UNLESS OTHERWISE SPECIFIED.
- THE DIMENSIONS AND SPECIFICATION ARE INTENDED TO PRESENT GENERAL LAYOUT AND GENERAL DIMENSIONS OF THE PROJECT BUT NOT NECESSARILY ACCURATE. ACTUAL LOCAL CODES, LEVELS AND DIMENSIONS OF THE EQUIPMENT, THE CONTRACTOR IS HEREBY REQUIRED TO MAKE SUCH ADJUSTMENTS AS THE OBJECTS AS LOCATIONS, DISTANCES AND LEVELS ARE COVERED BY ACTUAL REQUIREMENTS.
- ANY DISCREPANCY BETWEEN THE PLANS AND SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR CLARIFICATION IMMEDIATELY.
- ALL LIGHTING AND COMMERCIAL OUTLET CIRCUITS SHALL BE 120 VOLT, 60 HZ, 1 PHASE, 3 WIRE SYSTEM WITH GROUND. ALL WIRING SHALL BE INSTALLED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE. ALL WIRING SHALL BE INSTALLED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE.

LINE 1 - RED  
 LINE 2 - YELLOW  
 NEUTRAL - WHITE  
 GROUND - GREEN

- WIRING, SWITCHES, ENCLOSURES SHALL BE PROVIDED WITH THE FOLLOWING DIMENSIONS AS FOLLOWS:  
 (1) TO INCLUDE 100 MM  
 (2) TO INCLUDE 100 MM BUT NOT OVER 150  
 (3) TO INCLUDE 100 MM BUT NOT OVER 150  
 (4) TO INCLUDE 100 MM BUT NOT OVER 150  
 (5) TO INCLUDE 100 MM BUT NOT OVER 150
- ALL ELECTRICAL WORK SHALL BE PROVIDED BY THE CONTRACTOR UNLESS OTHERWISE SPECIFIED BY THE ARCHITECT. ALL WIRING SHALL BE INSTALLED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE. ALL WIRING SHALL BE INSTALLED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE.
- TYPE OF SERVICE ENTRANCE SHALL BE SINGLE PHASE, TWO WIRE PLUS GROUND, 120 VOLT, 60 HZ SYSTEM.
- CONDUITS AND GFCI SHALL THERE BE MORE THAN THE EQUIVALENT OF FOUR QUARTER BENDS IN ANY ONE RUN. ALL CONDUIT BENDS SHALL BE 90 DEGREE BY USING HYDRAULIC BENDERS. BENDS BEYOND 90 DEGREE MUST BE ACCORDANCE TO THE NATIONAL ELECTRICAL CODE.
- UPON COMPLETION OF ELECTRICAL CONSTRUCTION WORK, INSTALLATION RESISTANCE TEST AND FLUORESCENCE TEST SHALL BE PERFORMED BY THE CONTRACTOR. RESULTS OF THE INSTALLATION TO BE REPORTED IN DETAILS IN FORM APPROVED BY THE DESIGN/UTILITY ENGINEERING DEPARTMENT. THE GROUND RESISTANCE FOR ELECTRICAL SYSTEMS SHALL NOT BE MORE THAN 5 OHMS. CONSTRUCTION DRAWINGS RESISTANCE SHALL NOT EXCEED 10 OHMS.

|  |                             |
|--|-----------------------------|
|  | DUPLEX CONVENIENCE OUTLET   |
|  | PINLIGHT                    |
|  | 2X19W RECESSED TROFFER TYPE |
|  | SINGLE GANG SWITCH (LIGHTS) |
|  | CIRCUIT HOMERUN             |
|  | PANEL BOARD                 |
|  | KILOWATT-HOUR METER         |
|  | SERVICE ENTRANCE            |
|  | NEW CIRCUIT BREAKER         |
|  | EMERGENCY LIGHT             |
|  | EXIT LIGHT                  |

**2 LEGENDS AND SYMBOLS****PPA**

| CKT. NO.                    | LOAD DESCRIPTION                   | VOLT | POWER | CURRENT (AMPERE) | CIRCUIT BREAKER |    |   | WIRES AND CONDUIT      |                        |             |
|-----------------------------|------------------------------------|------|-------|------------------|-----------------|----|---|------------------------|------------------------|-------------|
|                             |                                    |      |       |                  | AT              | AF | P | UNGRND                 | GROUND                 | MMØ         |
|                             |                                    |      |       |                  |                 |    |   | TYPE                   | TYPE                   | TYPE        |
| 1                           | 6 - TROFFER, 4 - PINLIGHT, 2 - FAN | 230  | 1288  | 5.60             | 20              | 50 | 2 | 2 - 3.5mm <sup>2</sup> | 1 - 3.5mm <sup>2</sup> | 20 mm Ø PVC |
| 2                           | CONVENIENCE OUTLET                 | 230  | 1800  | 7.83             | 20              | 50 | 2 | 2 - 3.5mm <sup>2</sup> | 1 - 3.5mm <sup>2</sup> | 20 mm Ø PVC |
| 3                           | SPARE                              | 230  | 1000  | 4.35             | 30              | 50 | 2 | -                      | -                      | -           |
| 4                           | SPARE                              | 230  | 1000  | 4.35             | 30              | 50 | 2 | -                      | -                      | -           |
| <b>TOTAL CONNECTED LOAD</b> |                                    |      |       | <b>5088</b>      | <b>22.12</b>    |    |   |                        |                        |             |

**CIRCUIT PROTECTION COMPUTATION:**

$$I_2 = (5088 / 230 V) * 125\%$$

$$I_2 = 27.65 \text{ ampere}$$

**OVER CURRENT PROTECTION:**

USE: 60 AT, 2P CB BOLT-ON

**MAIN FEEDER:**

USE: 2 - 14mm<sup>2</sup> THHN WIRE & 1 - 8.0mm<sup>2</sup> TW GROUND WIRE

IN 25mm Ø IMC TYPE

**3 MISCELLANEOUS DETAIL**

SCALE: NOT TO SCALE

**1 GENERAL NOTES**

SCALE: NOT TO SCALE

**4 LOAD SCHEDULE**

SCALE: NOT TO SCALE



Republika ng Pilipinas  
 Lungsod ng Quezon  
**CITY ENGINEERING DEPARTMENT**

PROJECT TITLE:

PROPOSED CONSTRUCTION OF HAND  
 WASHING FACILITY AND  
 REHABILITATION OF KALIGTASAN DAY  
 CARE CENTER

LOCATION:

BARAMDAY HOLY SPIRIT, DISTRICT 2, QUEZON CITY

DRAWN BY:

MEL MARCOS

REVISIONS:

SUBMITTED BY:

ENGR. LEONIL DEL ROSARIO  
 PRC REGISTERED ELECTRICAL ENGINEER

RECOMMENDING APPROVAL:

ENGR. ISAGANI R. VERZOSA, JR.  
 PRC REGISTERED ELECTRICAL ENGINEER

APPROVED BY:

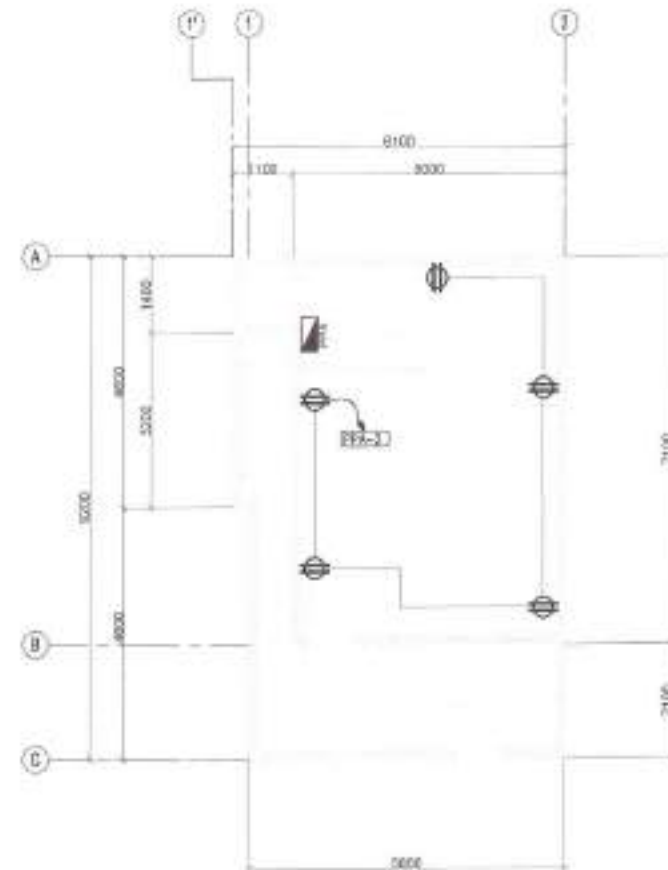
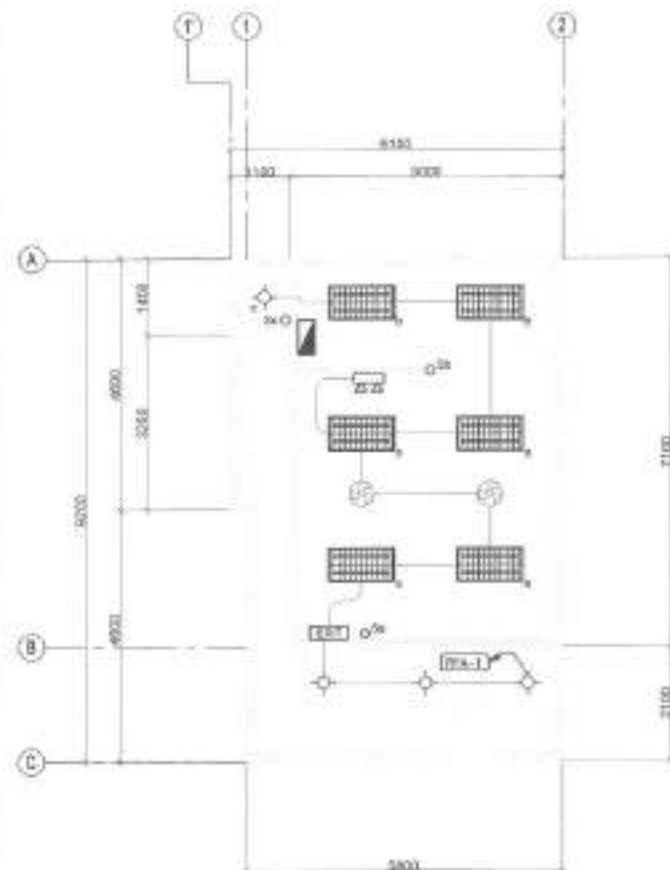
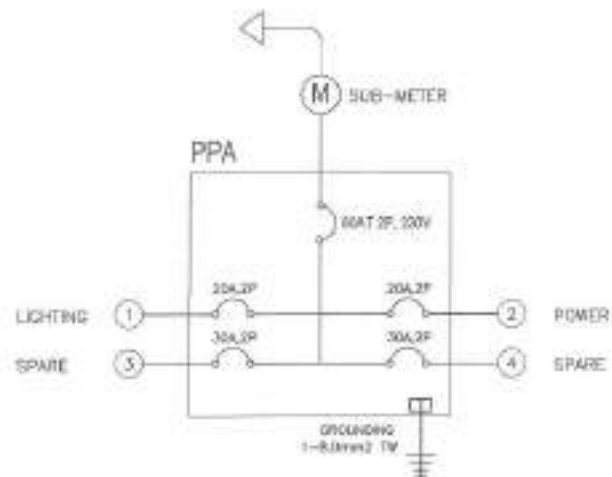
HON. MA. JOSEFINA G. BELMONTE  
 CITY ENGINEER, QUEZON CITY

SHEET CONTENT:

GENERAL NOTES  
 LEGENDS AND SYMBOLS  
 MISCELLANEOUS DETAIL  
 LOAD SCHEDULE

SHEET NO.:

EL-01  
 09/11



**1 RISER DIAGRAM**

SCALE: NOT TO SCALE

**2 LIGHTING LAYOUT**

SCALE: 1:100 MTS

**3 POWER LAYOUT**

SCALE: 1:100 MTS



Republika ng Pilipinas  
Lungsod ng Quezon  
**CITY ENGINEERING DEPARTMENT**

PROJECT TITLE:  
**PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF KALIGTASAN DAY CARE CENTER**

LOCATION:  
BARANGAY HOLY SPIRIT, DISTRICT 2, QUEZON CITY

DRAWN BY: *MSD*  
DATE: 08/08/21  
CHECKED BY: *MS*  
REVISED:

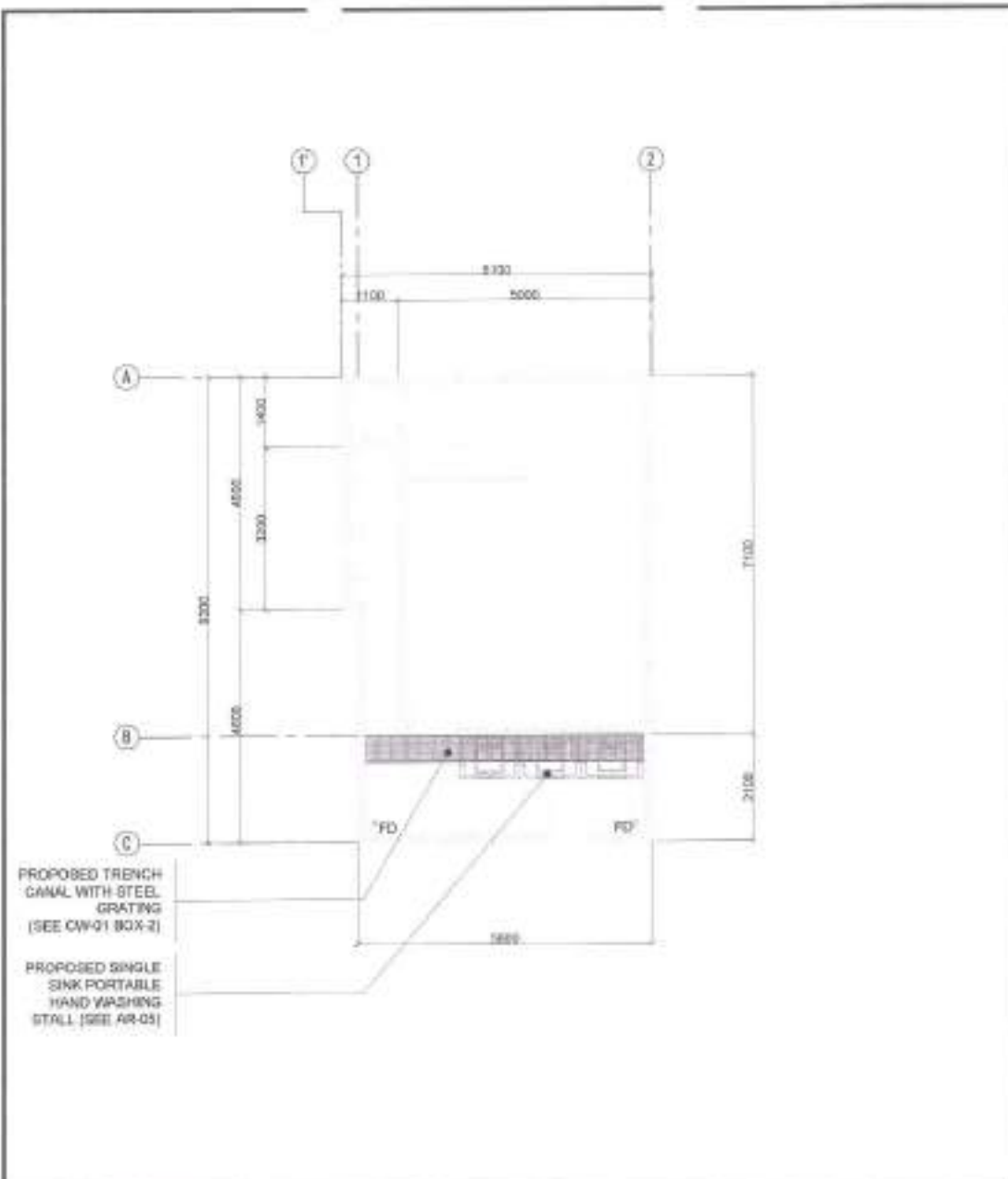
SUBMITTED BY:  
*[Signature]*  
**ENGR. LEO S. DEL ROSARIO**  
HEAD, PLANNING AND DESIGN DIVISION

RECOMMENDING APPROVAL:  
*[Signature]*  
**ENGR. ISAGANI R. VERZOSA, JR.**  
DEPUTY CITY ENGINEER IN CHARGE

APPROVED BY:  
*[Signature]*  
**HON. MA. JOSEFINA G. BELMONTE**  
CITY MAYOR, QUEZON CITY

SHEET CONTENT:  
RECORDING & SAFETY DIVISION  
POWER OFFICE

SHEET NO.:  
**EL-02**  
10 | 11



1 FLOOR PLAN

SCALE: 1:100 MTS

2 TRENCH DETAIL

SCALE: NOT TO SCALE

25mm x 4mm thk FLAT BAR  
25mm x 4mm thk FLAT BAR50mm x 50mm x 4mm thk  
CHANNEL BAR25 25 25 25 25  
25 25 25 25 25

500

500

100 300 100

4"THK CHB

STEEL GRATING COVER

650  
100  
400  
100  
50

3-10mm Ø

10mm Ø @300 O.C.



Republika ng Pilipinas  
Lungsod ng Quezon  
**CITY ENGINEERING DEPARTMENT**

PROJECT TITLE:

**PROPOSED CONSTRUCTION OF HAND  
WASHING FACILITY AND  
REHABILITATION OF KALIGTASAN DAY  
CARE CENTER**

LOCATION:

BARANGAY HOLY SPIRIT, DISTRICT 2, QUEZON CITY

DRAWN BY: JCS

DATE: 08/08/20

CHECKED BY: JCS

REVISION NO.:

SUBMITTED BY:

ENGR. LEO S. DEL ROSARIO  
REGISTERED PROFESSIONAL ENGINEER

RECOMMENDING APPROVAL:

ENGR. ISAGANI R. VERZOSA, JR.  
REGISTERED PROFESSIONAL ENGINEER

APPROVED BY:

HON. MA. JOSEFINA G. BELMONTE  
CITY MAYOR, QUEZON CITY

SHEET CONTENT

FLOOR PLAN  
TRENCH DETAIL

SHEET NO.

**CW-01**  
11 | 11



SITE



1 VICINITY MAP

SCALE: NTS

SITE



2 LOCATION PLAN

SCALE: NTS

3 PERSPECTIVE

SCALE: NTS



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| AR-03 | EXISTING GROUND FLOOR PLAN<br>PROPOSED GROUND FLOOR          |
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Republika ng Pilipinas  
Lungsod ng Quezon  
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:

PROPOSED CONSTRUCTION OF  
HAND WASHING FACILITY AND  
REHABILITATION OF  
MAPAYAPA DAYCARE CENTER

LOCATION:

BARANGAY HOLY SPIRIT, DISTRICT 2, QUEZON CITY

DRAWN BY: JMD

DATE: MAR 16, 2021

CHECKED BY: JMD

REVISION NO.: 1

SUBMITTED BY:

ENGR. LEO S. DEL ROSARIO  
HEAD, PLANNING & PROJECT MANAGEMENT

RECOMMENDING APPROVAL:

ENGR. ISAAC R. VERZOSA, JR.  
OIC, CHIEF ENGINEERING DIVISION

APPROVED BY:

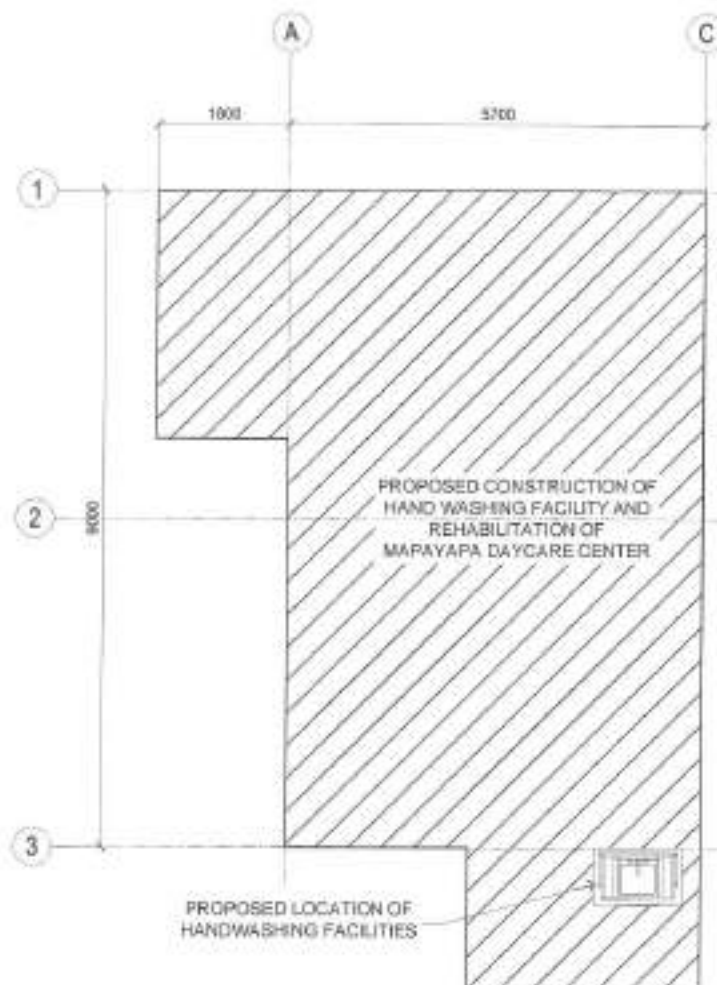
HON. RA. JOSEFINA G. BELMONTE  
CITY MAOR, QUEZON CITY

SHEET CONTENT:

VICINITY MAP  
LOCATION PLAN  
PERSPECTIVE

SHEET NO.:

AR-01  
01 | 12



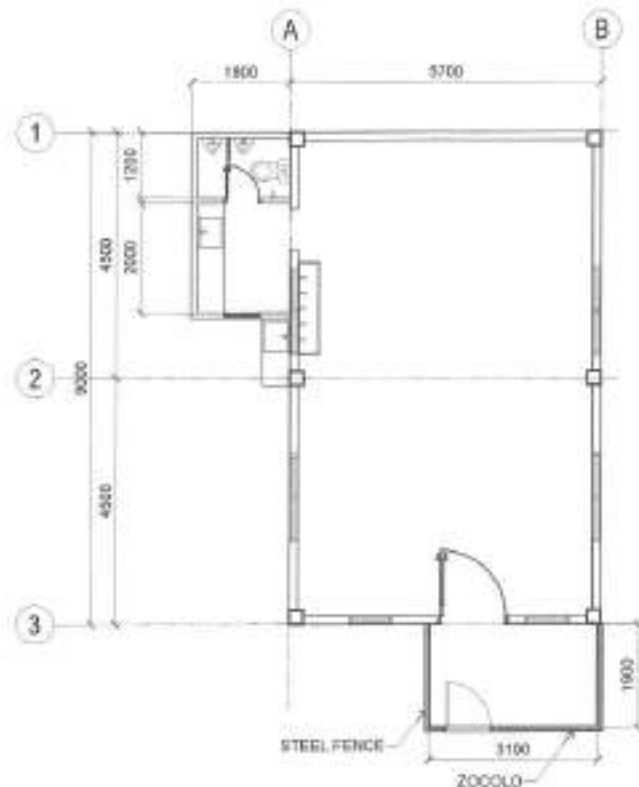
## 2 | SITE DEVELOPMENT PLAN

SCALE: NTS



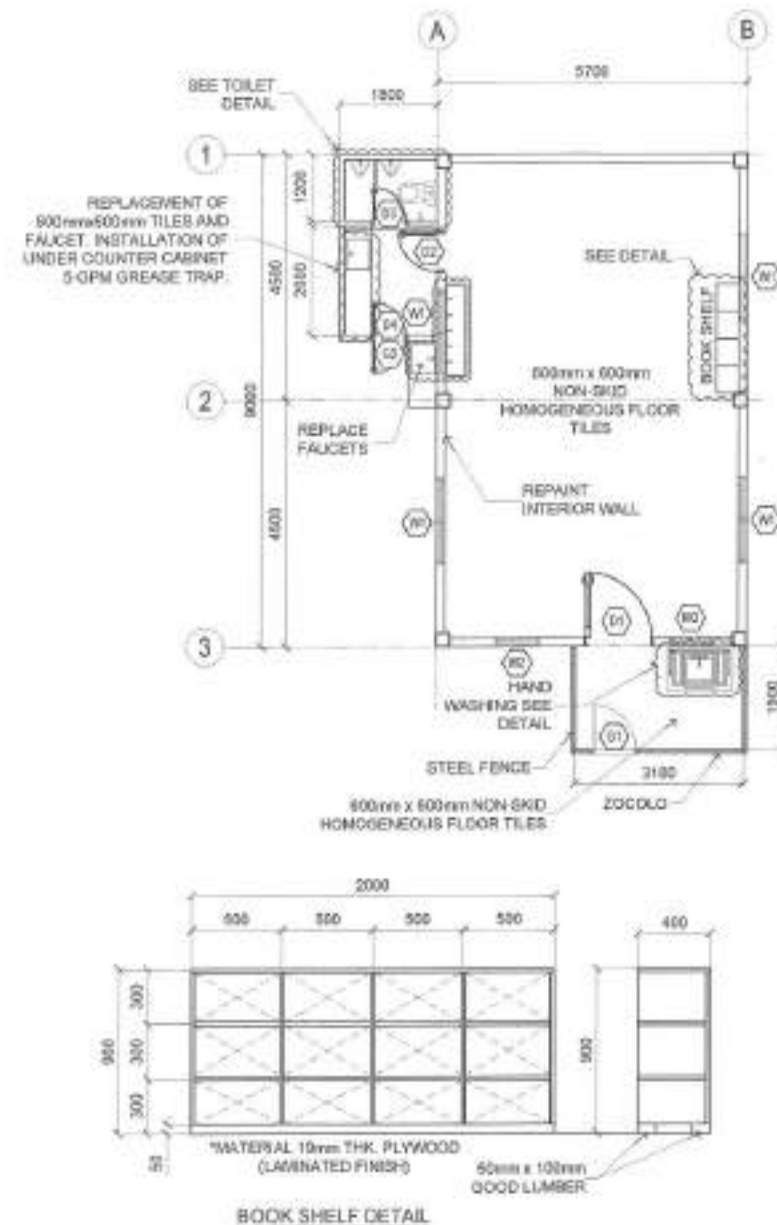
Republika ng Pilipinas  
Lungsod ng Quezon  
CITY ENGINEERING DEPARTMENT

| PROJECT TITLE   | DRAWN BY: <i>DK</i>            | SUBMITTED BY:   | RECOMMENDING OFFICER:   | APPROVED BY:  | SHEET CONTENT         | SHEET NO.      |
|---|--------------------------------|---|---|---|-----------------------|----------------|
| PROPOSED CONSTRUCTION OF<br>HAND WASHING FACILITY AND<br>REHABILITATION OF<br>MAPAYAPA DAYCARE CENTER | DATE: MAR 16, 2021             | <i>[Signature]</i>  | <i>[Signature]</i>  |   | SITE DEVELOPMENT PLAN | AR-02<br>02/12 |
| LOCATION:<br>SADANGAY HOLY SPIRIT DISTRICT 2, QUEZON CITY   | CHECKED BY: <i>[Signature]</i> | ENGR. LEO S. DEL ROSARIO<br>HEAD, PLANNING & PROGRAM DIVISION | ENGR. ISAGAN F. VERZOSA, JR.<br>DC, CITY ENGINEERING DEPARTMENT | HON. MA. JOSEFINA G. BELMONTE<br>CITY SIVLER, QUEZON CITY |                       |                |
|   | REVISION NO.: 1                |   |   |   |                       |                |



STEEL FENCE

ZOCOLO



BOOK SHELF DETAIL

## 1 EXISTING GROUND FLOOR PLAN

SCALE: 1:100 METERS

## 2 PROPOSED GROUND FLOOR

SCALE: 1:100 METERS



Republika ng Pilipinas  
Lungsod ng Quezon  
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:

PROPOSED CONSTRUCTION OF  
HAND WASHING FACILITY AND  
REHABILITATION OF  
MAPAYAPA DAYCARE CENTER

LOCATION:

BARANGAY HOLY SPIRIT DISTRICT 3, QUEZON CITY

DESIGNED BY: DMC

DATE: MAR 18, 2021

CHECKED BY: JH

REVISION NO. 1

SUBMITTED BY:

*(Signature)*  
ENGR. LEO S. DEL ROSARIO  
HEAD, PLANNING & PROGRAMMING DIVISION

RECOMMENDING APPROVAL:

*(Signature)*  
ENGR. ISAGAN R. VENZOSA, JR.  
CITY ENGINEERING DEPARTMENT

APPROVED BY:

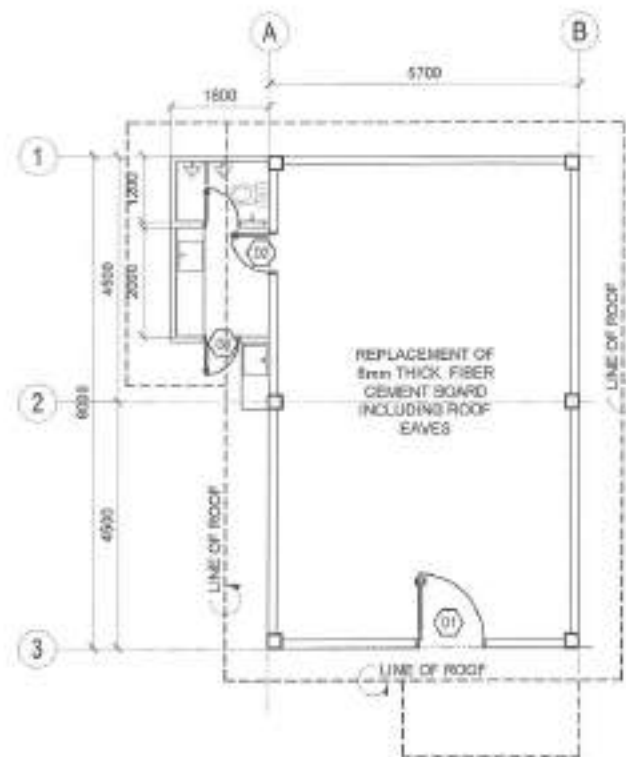
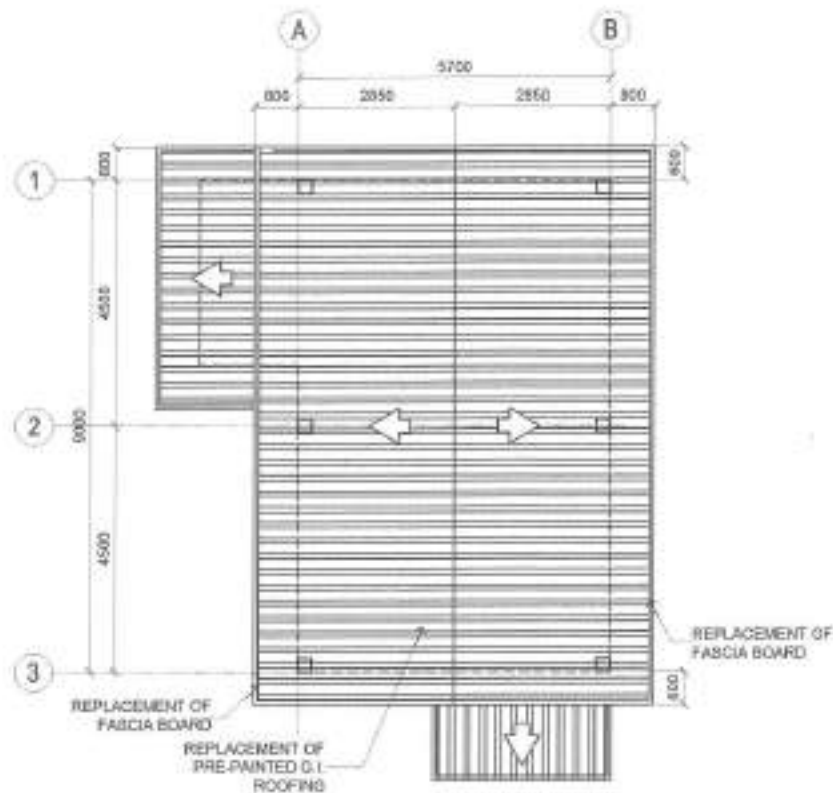
*(Signature)*  
HON. RA. JOSEFINA G. BELMONTE  
CITY MAYOR - DEPUTY

SHEET CONTENT:

EXISTING GROUND  
FLOOR PLAN  
PROPOSED GROUND  
FLOOR

SHEET NO.

AR-03  
03/12



1 ROOF PLAN

SCALE: 1:100 METERS

2 REFLECTED CEILING PLAN

SCALE: 1:100 METERS



Republika ng Pilipinas  
Lungsod ng Quezon  
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:  
**PROPOSED CONSTRUCTION OF  
HAND WASHING FACILITY AND  
REHABILITATION OF  
MAPAYAPA DAYCARE CENTER**

LOCATION:  
BARANGAY HOLY SPIRIT, DISTRICT 2, QUEZON CITY

DRAWN BY: JMB  
DATE: MAR 16, 2021  
CHECKED BY: JMB  
REVISION NO. 1

DESIGNED BY:  
  
ENGR. LEO S. DEL ROSARIO  
HEAD, PLANNING & PROGRAM DIVISION

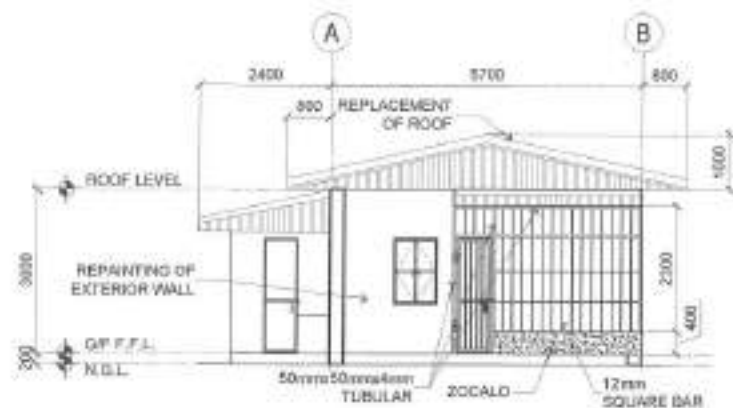
RECOMMENDING APPROVAL:  
  
ENGR. ISAGANI R. VERZOSA, JR.  
CIC CITY ENGINEERING DEPARTMENT

APPROVED BY:  
  
HON. MA. JOSEFINA G. BELMONTE  
CIV. ENGINEER - QUEZON CITY

SHEET CONTENT:  
ROOF PLAN  
REFLECTED CEILING  
PLAN

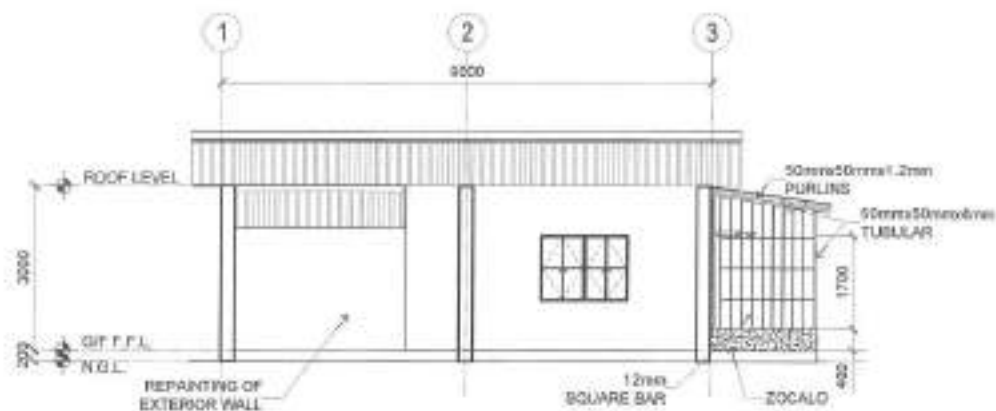
SHEET NO.  
**AR-04**  
**04/12**





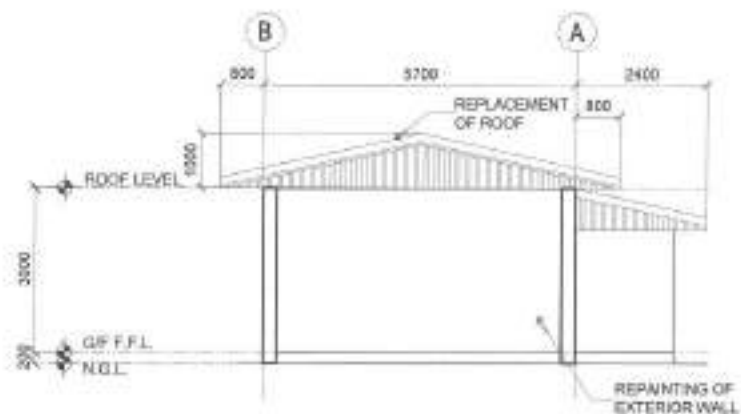
1 FRONT ELEVATION

SCALE: 1:100 METERS



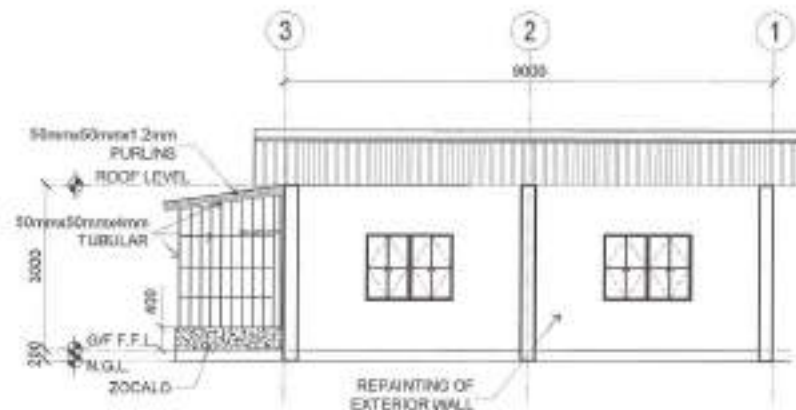
3 LEFT SIDE ELEVATION

SCALE: 1:100 METERS



2 REAR ELEVATION

SCALE: 1:100 METERS



4 RIGHT SIDE ELEVATION

SCALE: 1:100 METERS



Republika ng Pilipinas  
Lungsod ng Quezon  
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:

PROPOSED CONSTRUCTION OF  
HAND WASHING FACILITY AND  
REHABILITATION OF  
MAPAYAPA DAYCARE CENTER

LOCATION:

BARANGAY HOLY SPIRIT, DISTRICT 2, QUEZON CITY

DRAWN BY: ENC

DATE: MAR 16, 2021

CHECKED BY: JEN

REVISION NO: 1

SUBMITTED BY:

ENGR. LEONIL DEL ROSARIO  
HEAD, PLANNING & PROGRAM DIVISION

RECOMMENDED APPROVAL:

ENGR. ISAAC R. VERZOSA, JR.  
DG OF THE ENGINEERING DIVISION

APPROVED BY:

HON. MA. JOSEFINA G. BELMONTTE  
CITY MAYOR - QUEZON CITY

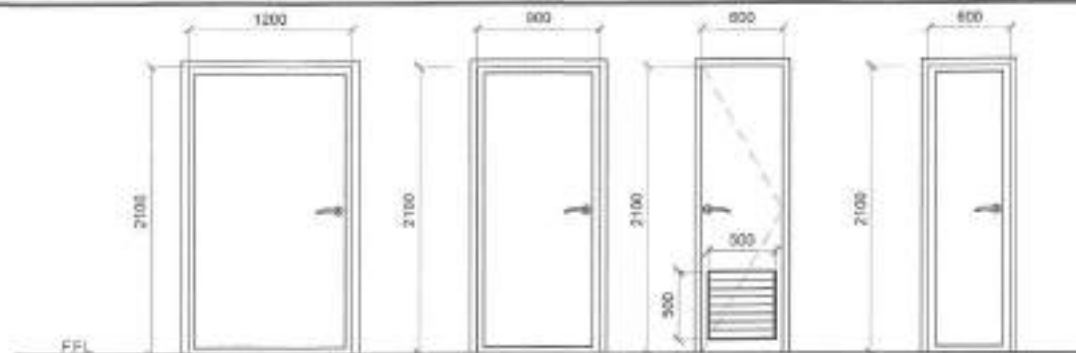
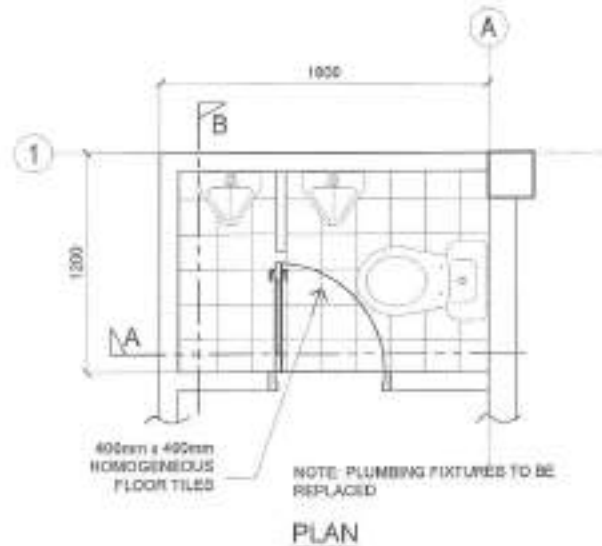
SHEET CONTENT:

FRONT ELEVATION  
REAR ELEVATION  
LEFT SIDE ELEVATION  
RIGHT SIDE ELEVATION

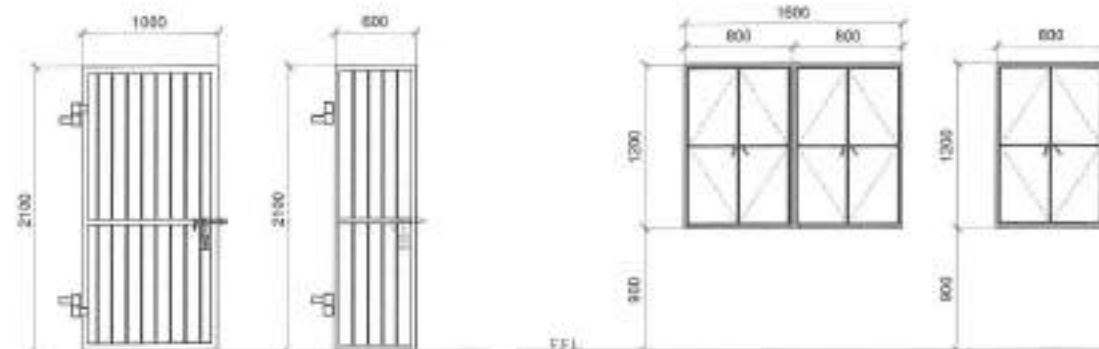
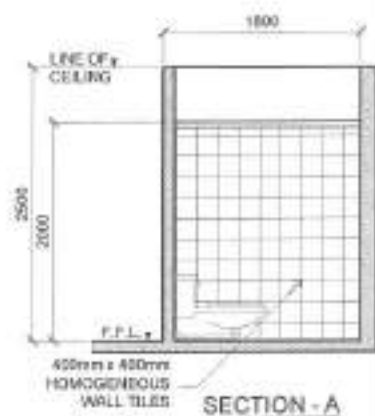
SHEET NO:

AR-05  
05/12





| NAME        | (D1)         | (D2)         | (D3)                      | (D4)         |
|-------------|--------------|--------------|---------------------------|--------------|
| NO. OF SETS | 1            | 1            | 1                         | 1            |
| DESCRIPTION | PANEL DOOR   | PANEL DOOR   | PVC FLUSH DOOR W/ LOUVERS | PANEL DOOR   |
| LOCATION    | GROUND FLOOR | GROUND FLOOR | GROUND FLOOR              | GROUND FLOOR |



| NAME        | (W1)  | (W2)   |
|-------------|---|--|
| NO. OF SETS | 1   | 1  |
| DESCRIPTION | 50mmx50mmx3mm THK. TUBULAR AND 12mm SQUARE BAR STEEL DOOR | 32mmØ O.I. PIPE / 12mm SQUARE BAR STEEL DOOR |
| LOCATION    | GROUND FLOOR  | GROUND FLOOR                                 |

| NAME        | (W1)                              | (W2)                              |
|-------------|-----------------------------------|-----------------------------------|
| NO. OF SETS | 4                                 | 2                                 |
| DESCRIPTION | STEEL CASEMENT WINDOW WITH SCREEN | STEEL CASEMENT WINDOW WITH SCREEN |
| LOCATION    | GROUND FLOOR                      | GROUND FLOOR                      |

**1 TOILET DETAIL**

SCALE: 1:50 METERS

**1 DOORS AND WINDOWS SCHEDULE**

SCALE: 1:30 METERS



Republika ng Pilipinas  
Lungsod ng Quezon  
**CITY ENGINEERING DEPARTMENT**

PROJECT TITLE:  
**PROPOSED CONSTRUCTION OF  
HAND WASHING FACILITY AND  
REHABILITATION OF  
MAPAYAPA DAYCARE CENTER**

LOCATION:  
SARANGGAP HOLY SPIRIT DISTRICT 3, QUEZON CITY

DRAWN BY: *[Signature]*  
DATE: AUG 18, 2021  
CHECKED BY: *[Signature]*  
REVISION NO.: 1

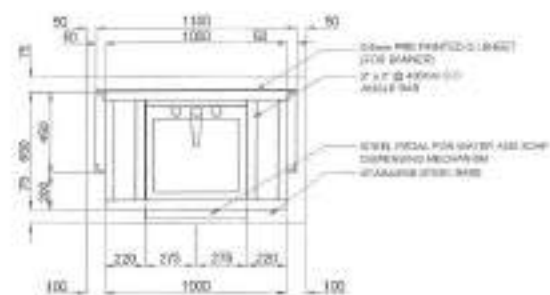
SUBMITTED BY:  
*[Signature]*  
**ENGR. LEO S. DEL ROSARIO**  
HEAD, PLANNING & PROJECTS DIVISION

RECOMMENDING APPROVAL:  
*[Signature]*  
**ENGR. JASON R. VERZOSA, JR.**  
DC, CITY ENGINEERING DEPARTMENT

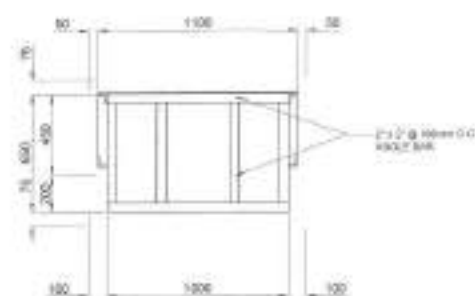
APPROVED BY:  
*[Signature]*  
**HON. NA. JOSEFINA G. BELMONTE**  
CITY MAYOR, QUEZON CITY

SHEET CONTENT  
TOILET DETAIL  
DOORS AND  
WINDOWS SCHEDULE

SHEET NO.  
**AR-06**  
**06/12**



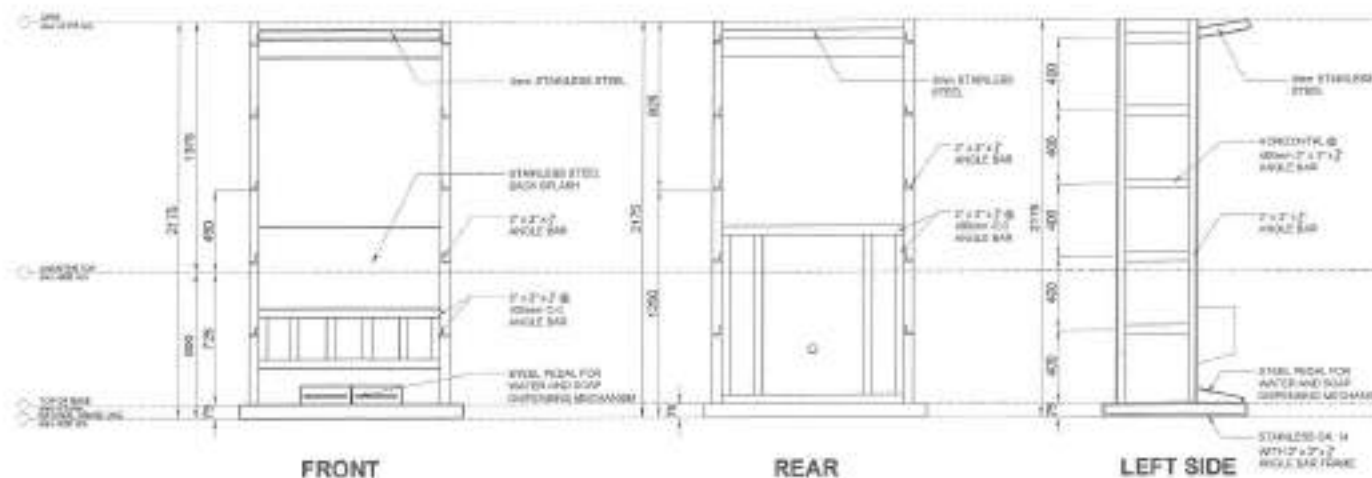
PLAN



ROOF PLAN

## 1 SINGLE SINK PORTABLE HAND WASHING STALL PLAN

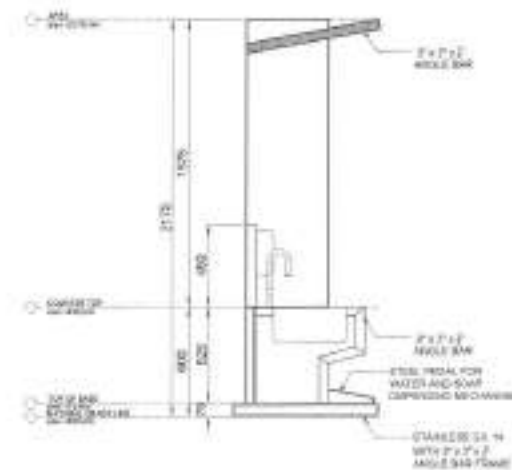
SCALE: 1:30ms



FRONT

REAR

LEFT SIDE



## 2 ELEVATIONS

SCALE: 1:30ms

## 3 TYPICAL SECTION

SCALE: 1:30ms



Republika ng Pilipinas  
Lungsod ng Quezon  
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:  
**PROPOSED CONSTRUCTION OF  
HAND WASHING FACILITY AND  
REHABILITATION OF  
MAPAYAPA DAYCARE CENTER**

LOCATION:  
BARANGAY TIGAY SPRING DISTRICT 2, QUEZON CITY

DESIGN BY: *[Signature]*  
DATE: AUG. 16, 2021  
CHECKED BY: *[Signature]*  
REVISION NO.: 1

SUBMITTED BY:  
*[Signature]*  
**ENGR. LEO S. DEL ROSARIO**  
HEAD, PLANNING & RECONSTRUCTION DIVISION

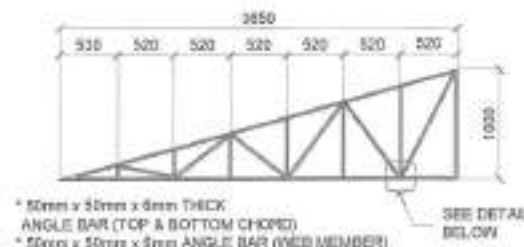
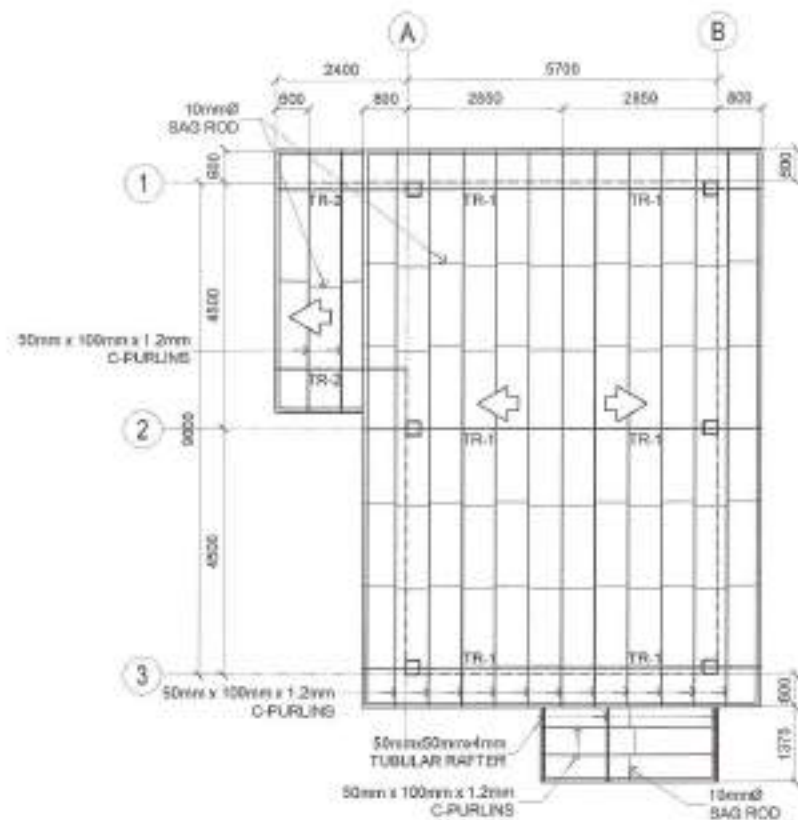
RECOMMENDING APPROVAL:  
*[Signature]*  
**ENGR. ISAGANI R. VERZOSA, JR.**  
CC, CITY ENGINEERING DEPARTMENT

APPROVED BY:  
*[Signature]*  
**HON. MA. JOSEFINA G. BELMORITE**  
CITY MAJOR, QUEZON CITY

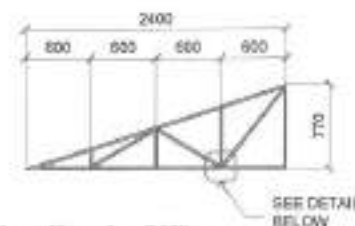
SHEET CONTENT:  
SHALL SHEET PORTABLE  
HAND WASHING STALL  
PLAN  
ELEVATIONS & SECTION

SHEET NO.

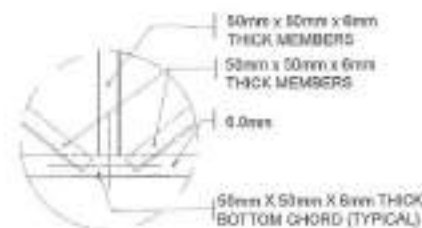
**ST-01**  
**07/12**



TR-1 DETAIL



TR-2 DETAIL



NOTE:

- \* 50 mm x 50 mm x 6mm THICK ANGLE BAR (TOP & BOTTOM CHORD)
- \* 50 mm x 50 mm x 6 mm ANGLE BAR (WEB MEMBER)
- \* 50 mm x 100 mm C-PURLINS SPACING AS SHOWN

1 ROOF FRAMING PLAN

SCALE: 1:100 METERS

2 TRUSS DETAIL

SCALE: 1:100 METERS



Republika ng Pilipinas  
Lungsod ng Quezon  
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:  
**PROPOSED CONSTRUCTION OF  
HAND WASHING FACILITY AND  
REHABILITATION OF  
MAPAYAPA DAYCARE CENTER**

LOCATION:  
BANGWAGY HILY STREET 2 DISTRICT 8, QUEZON CITY

DESIGNED BY: JAV  
DATE: 1 AUG 18, 2021  
REVISIONS: 1

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

RECOMMENDED APPROVAL:  
  
**ENGR. ISAGANI R. VERZOSA, JR.**  
CH. CITY ENGINEERING DEPARTMENT

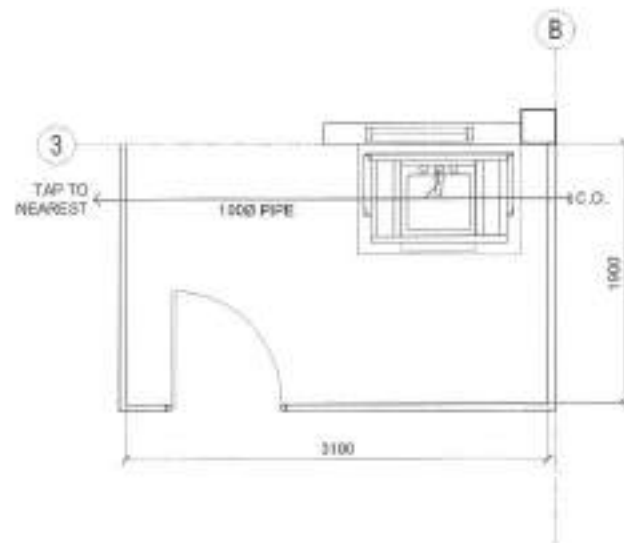
APPROVAL BY:  
  
**HON. MA. JOSEFINA G. BELMONTTE**  
CITY MAYOR, QUEZON CITY

SHEET CONTENT:  
ROOF FRAMING PLAN  
TRUSS DETAIL

SHEET NO.:  
**ST-02**  
**08/12**

**GENERAL NOTES:**

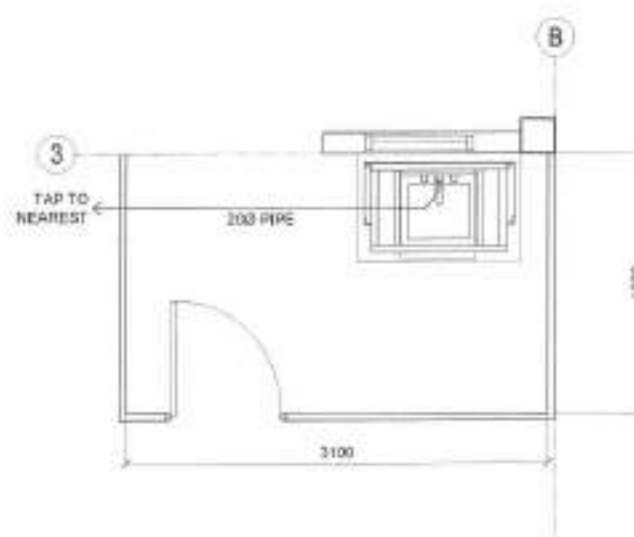
1. ALL THE PLUMBING SANITARY WORKS INCLUDED HEREIN SHALL BE EXECUTED ACCORDING TO THE PROVISIONS OF THE PHILIPPINE PLUMBING CODE, THE NATIONAL BUILDING CODE, RULES AND REGULATIONS OF QUEZON CITY.
2. COORDINATE THE DRAWINGS WITH OTHER RELATED DRAWINGS AND SPECIFICATIONS REQUIRED THEREAFTER. MAKE REVISIONS IMMEDIATELY IF ANY DISCREPANCY FOUND THEREIN.
3. ALL PIPES SHALL BE INSTALLED AS SHOWN ON PLANS. ANY MODIFICATION REQUIRED FOR PROPER LOCATION OF OTHER TRADES SHALL BE WITH PRIOR APPROVAL OF THE ENGINEER OR ARCHITECT.
4. PROPOSED SANITARY SYSTEMS SHALL BE CONFORM TO THE ACTUAL LOCATION, DEPTH AND HORIZONTAL LOCATION OF ALL EXISTING STRUCTURED PIPES AS NOTIFIED BY THE CONTRACTOR.
5. ALL SLOPES FOR HORIZONTAL DRAINAGE SHALL MAINTAIN MINIMUM UNLESS OTHERWISE SPECIFIED.
6. SIZES OF WATER SUPPLY PIPES TO FIXTURES SHALL BE IN ACCORDANCE WITH THE MANUFACTURERS' INSTRUCTIONS.
7. THE CONTRACTOR SHALL VERIFY ALL EXISTING UTILITIES AT SITE AND COORDINATE THE WORKS WITH THE SAME TO AVOID COLLISION, HITS AND WATER LINE SERVICE CONNECTIONS.
8. ALL WATER PIPES AND WATER TANKS SHALL BE PROTECTED BY PLUMBING INSULATION WITH A MINIMUM THICKNESS OF 25MM FOR EXPOSED PIPES.
9. ALL WATER PIPES SHALL BE HYDROSTATICALLY TESTED TO A PRESSURE 1.40 THE DESIGNED WORKING PRESSURE OF THE SYSTEM.
10. ALL SEWER AND WASTE DRAINAGE PIPES SHALL BE HYDROSTATICALLY TESTED AT LEAST 2.0 METERS HEAD TO ENSURE THAT THE SYSTEM ARE WATER TIGHT.
11. ALL DIMENSIONS ARE IN METERS AND ALL PIPES SIZES ARE IN MILLIMETER UNLESS OTHERWISE NOTED.
12. ALL PIPES AND FITTINGS SHALL BE IN ACCORDANCE WITH THE PHILIPPINE PLUMBING CODE.

**1 GENERAL NOTES****1. SEWER/WASTE AND VENT SYSTEM**

|     |                                |   |    |             |
|-----|--------------------------------|---|----|-------------|
| —●— | SEW. PIPE / WASTE PIPE         | ⊙ | SS | SOIL STACK  |
| --- | VENT PIPE / VENT PIPE LINE     | □ | FD | FLOOR DRAIN |
| --- | STORM DRAIN PIPE               | ⊞ | SD | STORM DRAIN |
| ⊙   | FLOOR DRAIN / GROUND DRAIN     | ⊞ | SD | STORM DRAIN |
| — — | GROUND DRAIN                   | ⊞ | SD | STORM DRAIN |
| ⊙   | DRAINAGE STACK / DRAINAGE      | ⊞ | SD | STORM DRAIN |
| ⊙   | VENT STACK / VENT THROUGH ROOF |   |    |             |

**2. WATER DISTRIBUTION SYSTEM**

|   |     |                 |
|---|-----|-----------------|
| — | C/W | COLD WATER LINE |
| ⊙ | C/W | COLD WATER TAP  |
| ⊞ | G/W | GROUNDED        |
| ⊞ | G/W | GROUNDED        |
| ⊞ | W/T | WATER TAP       |
| ⊞ | B/C | BALCONY DRAIN   |

**2 LEGEND AND SYMBOLS****3 WASTE/ SEWER LAYOUT****4 WATERLINE LAYOUT**

SCALE: 1:100 METERS



Republika ng Pilipinas  
Lungsod ng Quezon  
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:

PROPOSED CONSTRUCTION OF  
HAND WASHING FACILITY AND  
REHABILITATION OF  
MAPAYAPA DAYCARE CENTER

LOCATION:  
BAYANANG HELY BARRIO, DISTRICT 2, QUEZON CITY

DRAWN BY: CMC

DATE: MAR. 15, 2021

CHECKED BY: JAC

REFERENCE NO. 1

SUBMITTED BY:

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

RECOMMENDING OFFICIAL:

ENGR. SACRA R. VERZOSA, JR.  
CH. CITY ENGINEERING DEPARTMENT

APPROVED BY:

HON. MA. JOSEFINA S. BELMONTE  
CITY MAYOR, QUEZON CITY

SHEET CONTENT:

GENERAL NOTES,  
LEGEND AND  
SYMBOLS  
WASTE/ SEWER  
LAYOUT  
WATERLINE LAYOUT

SHEET NO.:

PL-01  
09/12



**GENERAL NOTES:**

- ALL ELECTRICAL WORKS SHALL BE DONE IN ACCORDANCE WITH THE PROVISIONS OF THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE, THE LAWS AND ORDINANCES OF THE LOCAL CODES (PROFORMA) AUTHORITIES AND THE REQUIREMENTS OF THE LOCAL POWER AND TELEPHONE UTILITY COMPANY.
- THE CONTRACTOR SHALL SECURE ALL PERMITS AND PAY ALL FEES REQUIRED FOR THE WORK AND SHALL FURNISH THE DESIGNER THROUGH THE ENGINEER, FINAL CERTIFICATES OF ELECTRICAL INSPECTION AND APPROVAL FROM PROPER GOVERNMENT AUTHORITIES FOR COMPLETION OF WORK.
- ALL BRANCHED BRANCH CIRCUITS SHALL BE PVC CONDUITS AND FOR EXPOSED INSTALLATION SHALL BE SEC SUPPORTED BY CONDUIT CLAMPS EVERY 200 MILLIMETER.
- PULL BOXES SHALL BE PROVIDED BY THE CONTRACTOR WHENEVER NECESSARY TO FACILITATE WIRE PULLING EVEN IF THESE ARE NOT INDICATED ON THE PLANS. SIZE OF ALL PULLBOXES SHALL BE COMPUTED BASED ON THE CODE REQUIREMENTS. SUBMIT SHOP DRAWINGS TO THE ENGINEER FOR APPROVAL PRIOR TO FABRICATION. LOCATION OF PULLBOXES SHALL BE APPROVED BY THE ARCHITECT/ENGINEER AND MUST BE REFLECTED ON THE "AS-BUILT" PLAN.
- ALL POWER OUTLETS AND SWITCHES SHALL BE GROUNDING TYPE WITH PARALLEL SLOTS FOR 230V.
- PROVIDE GROUND FAULT CURRENT INTERRUPTER CIRCUIT BREAKER FOR LOADS MARKED "GFCI" ON THE PLAN.
- ALL METALLIC CONDUITS, CABINETS AND EQUIPMENT SHALL BE PROPERLY GROUNDING AND BONDED.
- UNLESS OTHERWISE NOTED, MOUNTING HEIGHT FOR WALL MOUNTED DEVICES SHALL BE AS FOLLOWS:

RECEPTACLE OUTLET - 300 MM AFF. (1800 MM ABOVE WORKING SURFACE)

TELEPHONE OUTLET - 300 MM AFF.

DATA OUTLET - 300 MM AFF.

LIGHTING SWITCH - 1800 MM AFF.

PANELBOARD - 1800 MM AFF.

- REFER TO MECHANICAL, PLUMBING AND FIRE PROTECTION DRAWINGS FOR MOUNTING AND LOCATIONS OF EQUIPMENT AS WELL AS THEIR CONTROL REQUIREMENTS AS SPECIFIED AND OR SHOWN UNDER THEIR RESPECTIVE SECTIONS.
- ALL MATERIALS TO BE USED SHALL BE OF THE BEST QUALITY, BRAND NEW AS SPECIFIED.
- THE DRAWINGS AND SPECIFICATIONS ARE INTENDED TO PRESENT GENERAL LAYOUT AND BROAD OUTLINE DESCRIPTION OF THE PROJECT BUT DO NOT NECESSARILY INDICATE DETAILED ACTUAL LOCATIONS, LEVELS AND DISTANCES OF THE EQUIPMENT. THE CONTRACTOR IS HEREBY REQUIRED TO MAKE SUCH ADJUSTMENT AT THE JOB SITE AS LOCATION, DISTANCES AND LEVELS ARE GOVERNED BY ACTUAL FIELD CONDITIONS.
- ANY DISCREPANCY BETWEEN THE PLANS AND SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR CLARIFICATION (DISCUSS).
- ALL LIGHTING AND COMMUNICATION OUTLET CIRCUITS SHALL BE 2.5 SQ. MM. 3-WIRE COPPER WIRE UNLESS OTHERWISE NOTED. MINIMUM SIZE OF WIRE SHALL BE 2.5 SQ. MM. COPPER WIRE. ALL WIRES AND CABLES SHALL BE COLOR CODED AS FOLLOWS:

LINE 1 - RED

LINE 2 - YELLOW

NEUTRAL - WHITE

GROUND - GREEN

- BOXES, WIRE, GUTTERS, ENCLOSURE SHALL BE FABRICATED FROM STEEL WITH THICKNESS AS FOLLOWS:  
 MAXIMUM WIDTH OF THE WIDEST SURFACE STEEL:  
 UP TO INCLUDING 152.40 MM      GA 18 PAINTED WITH METAL PRIMER EPOXY AND TOPCOAT  
 OVER 152.40 MM BUT NOT OVER 457.20      GA 14 PAINTED WITH METAL PRIMER EPOXY AND TOPCOAT  
 OVER 457.20 MM BUT NOT OVER 762.00      GA 12 PAINTED WITH METAL PRIMER EPOXY AND TOPCOAT  
 OVER 762.00      GA 10 PAINTED WITH METAL PRIMER EPOXY AND TOPCOAT
- ALL ELECTRICAL WORKS HEREIN SHALL BE EXECUTED BY EXPERIENCED MEN UNDER THE DIRECT SUPERVISION OF A FULL-TIME LICENSED ELECTRICAL ENGINEER AND A DULY ACCREDITED ELECTRICAL CONTRACTOR BY FORM. WORKS SHALL BE NEATLY PLACED, SECURELY FASTENED AND PROPERLY FINISHED.
- TYPE OF SERVICE ENTRANCE SHALL BE SINGLE-PHASE, TWO-WIRE PLUS GROUND, 60 HERTZ, 230V AC W/SMALL.
- CONDUITS IN NO CASE SHALL THERE BE MORE THAN THE EQUIVALENT OF FOUR QUARTER INCH IN ANY ONE RUN. ALL CONDUIT BENDS SHALL BE FIELD MADE BY USING HYDRAULIC BENDING. MINIMUM BENDING RADIUS MUST BE IN ACCORDANCE TO THE CODE REQUIREMENTS.
- UPON COMPLETION OF ELECTRICAL CONSTRUCTION WORK, SUBSTITUTION RESISTANCE TEST AND FUNCTIONALITY TEST SHALL BE PERFORMED BY THE CONTRACTOR INCLUSIVE OF THE INSTALLATION TO BE REPORTED IN DETAILS ON FORMS APPROVED BY THE QUEZON CITY ENGINEERING DEPARTMENT REPRESENTATIVE. THE GROUND RESISTANCE FOR ELECTRICAL SYSTEMS SHALL NOT BE MORE THAN 5 OHMS. COMMUNICATION GROUNDING RESISTANCE SHALL NOT EXCEED 2 OHMS.

|  |                             |       |                       |
|--|-----------------------------|-------|-----------------------|
|  | DUPLEX CONVENIENCE OUTLET   | 30"   | SELECTOR SWITCH (FAN) |
|  | CEILING FAN                 | PPA-2 | CIRCUIT HOMERUN       |
|  | PINLIGHT                    | PPA   | PANEL BOARD           |
|  | 2X18W RECESSED TROFFER TYPE | (M)   | KILOWATT-HOUR METER   |
|  | SINGLE GANG SWITCH (LIGHTS) |       | EMERGENCY LIGHT       |
|  | TWO GANG SWITCH (LIGHTS)    | EXIT  | EXIT LIGHT            |

**2 LEGEND & SYMBOLS**

SCALE NTS

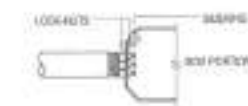
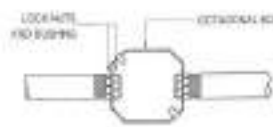


BEND TO BE NOT LESS THAN 1.5 DIA.

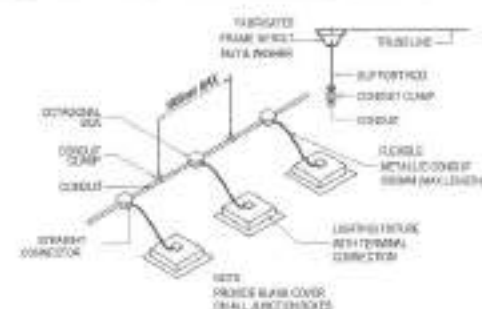


SHALL HOLD IF ANY BEND SHALL EXCEED 45°

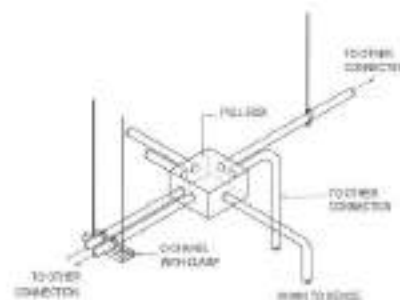
BENDING RADIUS DETAIL



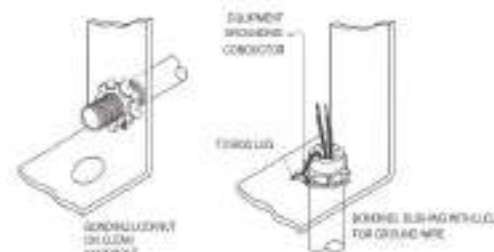
SPOT DETAIL OF CONDUIT RUN AND BOX



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



PROPER CONDUIT LAYOUT IN PULL BOX



NOTE:  
CONNECTION OF 1/2 INCHES RIGID METAL CONDUIT OR RIGID METAL WIRE CONDUIT TO A TWO-POLE BOX OR HUB IS CONSIDERED TO BE A BONDING CONNECTION.

BONDED RACEWAY TERMINATION FOR SHEET METAL

**1 GENERAL NOTES**

SCALE NTS



Republika ng Pilipinas  
Lungsod ng Quezon  
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:  
**PROPOSED CONSTRUCTION OF  
HAND WASHING FACILITY AND  
REHABILITATION OF  
MAPAYAPA DAYCARE CENTER**

LOCATION:  
BARANGAY HOLY SPIRIT, DISTRICT 2, QUEZON CITY

**3 MISCELLANEOUS DETAILS**

SCALE NTS

DRAWN BY: SHE  
DATE: JAN 18, 2021  
CHECKED BY: J  
REVISION NO.: 1

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

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

APPROVED BY:  
  
HON. MA. JOSEFINA G. BELMONTE  
CITY MANOR, QUEZON CITY

SHEET CONTENT:  
GENERAL NOTES,  
LEGENDS AND SYMBOLS,  
MISCELLANEOUS  
DETAILS

SHEET NO:  
**EL-01**  
**10/12**

## PPA

| CKT.NO.              | LOAD DESCRIPTION                          | VOLT | POWER | CURRENT (AMPERE) | CIRCUIT BREAKER |    |   | WIRES AND CONDUIT      |                        |             |
|----------------------|---|------|-------|------------------|-----------------|----|---|------------------------|------------------------|-------------|
|                      |   |      |       |                  | AT              | AF | P | UNGRND                 | GROUND                 | MMP         |
|                      |   |      |       |                  |                 |    |   | THHN                   | TW                     |             |
| 1                    | SPACE                                     | 230  | -     | -                | -               | -  | - | -                      | -                      | -           |
| 2                    | 6 - LIGHTING, 4 - PINLIGHT, 2 - ORBIT FAN | 230  | 1296  | 5.63             | 20              | 50 | 2 | 2 - 3.5mm <sup>2</sup> | 1 - 3.5mm <sup>2</sup> | 20 mm Ø PVC |
| 3                    | 5 - CONVENIENCE OUTLET                    | 230  | 900   | 3.91             | 20              | 50 | 2 | 2 - 3.5mm <sup>2</sup> | 1 - 3.5mm <sup>2</sup> | 20 mm Ø PVC |
| 4                    | SPARE                                     | 230  | 2300  | 10.00            | 30              | 50 | 2 | -                      | -                      | -           |
| 5                    | SPARE                                     | 230  | 2300  | 10.00            | 30              | 50 | 2 | -                      | -                      | -           |
| TOTAL CONNECTED LOAD |   |      | 6796  | 29.55            |                 |    |   |                        |                        |             |

## CIRCUIT PROTECTION COMPUTATION:

$$I_T = (6796 / 230 \text{ V}) * 125\%$$

$$I_T = 29.55 * 1.25$$

$$I_T = 36.94 \text{ ampere}$$

## OVER CURRENT PROTECTION:

USE: 60 AT, 2P CB BOLT-ON

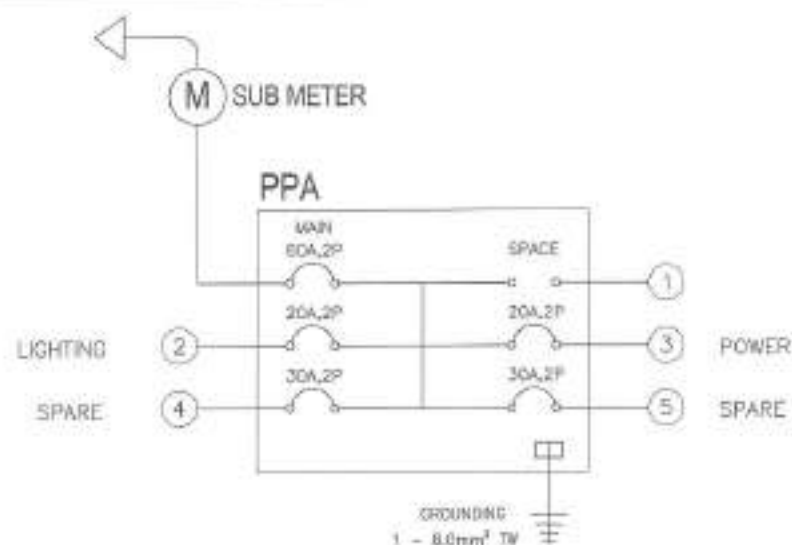
## MAIN FEEDER:

USE: 2 - 14mm<sup>2</sup> THHN WIRE & 1 - 8.0mm<sup>2</sup> TW GROUND WIRE

IN 25mm Ø IMC TYPE

## 1 LOAD SCHEDULE

SCALE: NTS



## 2 RISER DIAGRAM

SCALE: NTS



Republika ng Pilipinas  
Lungsod ng Quezon  
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:  
**PROPOSED CONSTRUCTION OF  
HAND WASHING FACILITY AND  
REHABILITATION OF  
MAPAYAPA DAYCARE CENTER**

LOCATION:  
BARANGAY HELY DING DISTRICT 2 QUEZON CITY

DRAWN BY: DM

DATE: MAR. 16, 2021

CHECKED BY: JM

REVISION NO.: 1

SUBMITTED BY:

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

RECOMMENDING APPROVAL:

ENGR. ISADORA R. VERZOSA, JR.  
CIC CITY ENGINEERING DEPARTMENT

APPROVED BY:

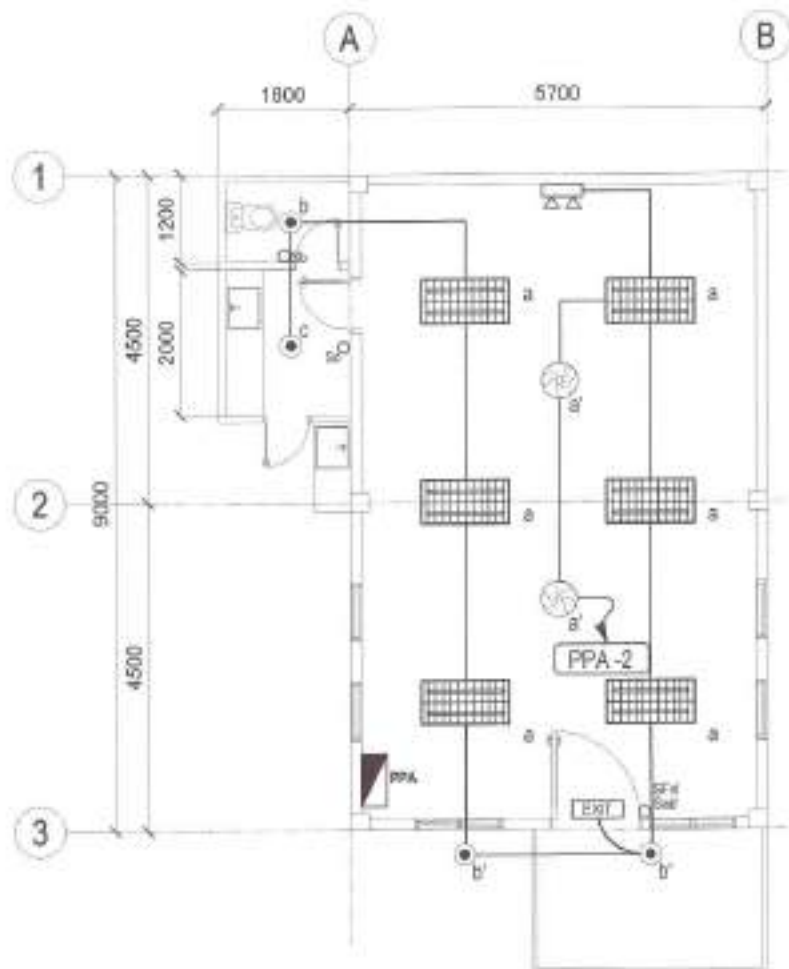
HON. MA. JOSEFINA S. BELMONTE  
CITY MAYOR - QUEZON CITY

SHEET CONTENT

LOAD SCHEDULE  
RISER DIAGRAM

SHEET NO.

EL-02  
11 | 12



## 1 LIGHTING LAYOUT

SCALE: 1:75 MTS

## 2 POWER LAYOUT

SCALE: 1:75 MTS



Republika ng Pilipinas  
Lungsod ng Quezon  
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:  
**PROPOSED CONSTRUCTION OF  
HAND WASHING FACILITY AND  
REHABILITATION OF  
MAPAYAPA DAYCARE CENTER**

LOCATION:  
DARWASAY HOLY SPIRIT DISTRICT 3 QUEZON CITY

DRAWN BY: CMK

DATE: AUG. 16, 2021

CHECKED BY: JMW

REVISION NO.: 1

SUBMITTED BY:

  
ENGR. LEO S. DEL ROSARIO  
SENIOR PLANNING & PROGRAMMING DIVISION

RECOMMENDING APPROVAL:

  
ENGR. EUDON R. VERZOSA, JR.  
CHIEF, CITY ENGINEERING DEPARTMENT

APPROVED BY:

  
HON. MA. JOSEFINA G. BELMONTE  
CITY MAYOR, QUEZON CITY

SHEET CONTENT:

LIGHTING LAYOUT  
POWER LAYOUT

SHEET NO.:

EL-03  
12/12





## 2 LOCATION MAP

SCALE: NTS



## 3 VICINITY MAP

SCALE: NTS



## 1 PERSPECTIVE

SCALE: NTS

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| AR-03 | FLOOR PLAN<br>ROOF PLAN<br>REFLECTED CEILING PLAN   |
| AR-04 | ELEVATION W<br>ELEVATION Y<br>ELEVATION C<br>ELEVATION D  |
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Republika ng Pilipinas  
Lungsod ng Quezon  
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:

PROPOSED CONSTRUCTION OF HAND  
WASHING FACILITY AND REHABILITATION  
OF ZEBRA DAY CARE CENTER

LOCATION:

BRGY. HOLY SPIRIT, DISTRICT 8, QUEZON CITY

DRAWN BY: DGA

DATE: 8/22/2021

CHECKED BY: JMS

REVISIONS:

SUBMITTED BY:

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

RECOMMENDING APPROVAL:

ENGR. ISABELA R. VERZOSA, JR.  
DEP. CITY ENGINEERING DEPARTMENT

APPROVED BY:

HON. MA. JOSEFINA G. BELMONTE  
CITY MAYOR, QUEZON CITY

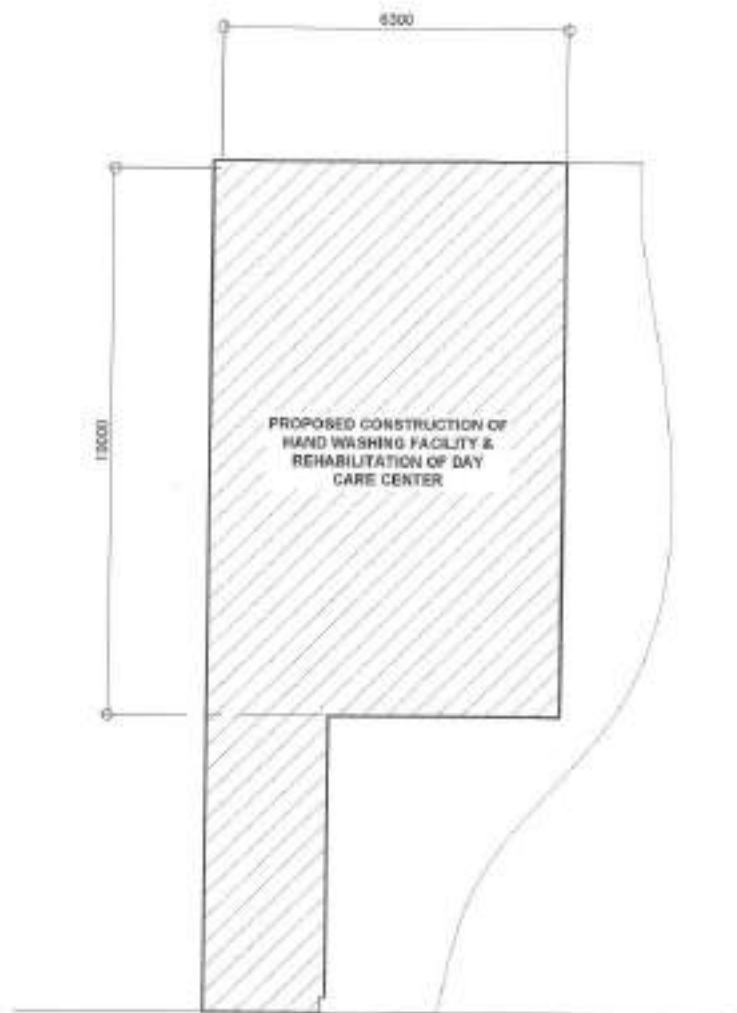
SHEET CONTENT:

PERSPECTIVE  
LOCATION MAP  
VICINITY MAP

SHEET NO.

AR-01  
01/11





## 3 SITE DEVELOPMENT PLAN

SCALE: 1:100M



Republika ng Pilipinas  
Lungsod ng Quezon  
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:

PROPOSED CONSTRUCTION OF HAND  
WASHING FACILITY AND REHABILITATION  
OF ZEBRA DAY CARE CENTER

LOCATION:

BRST, HOLY SPIRIT, DISTRICT 2, QUEZON CITY

DRAWN BY: JM

DATE: 8/12/2021

CHECKED BY: JAF

REVISIONS:

SUBMITTED BY:

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

RECOMMENDING OFFICER:

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

APPROVED BY:

HON. MA. JOSEFINA G. BELMONTÉ  
CITY MAJOR, QUEZON CITY

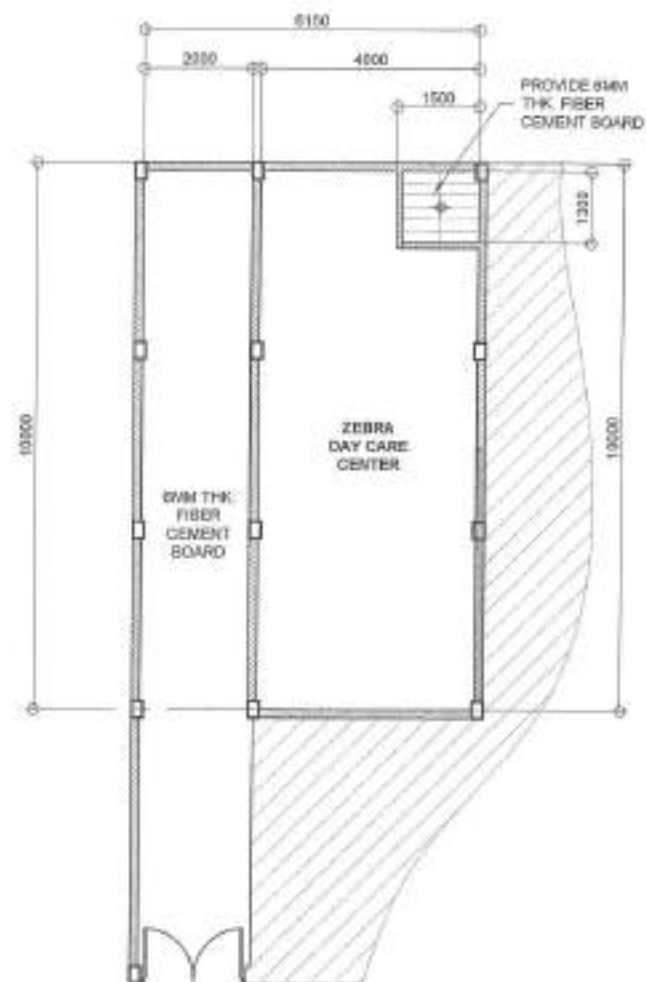
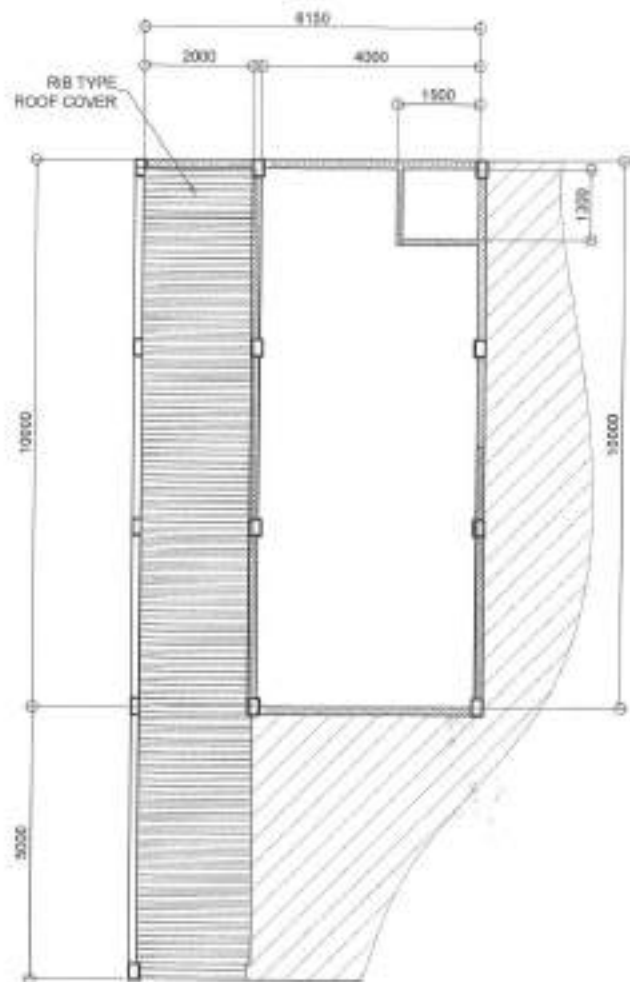
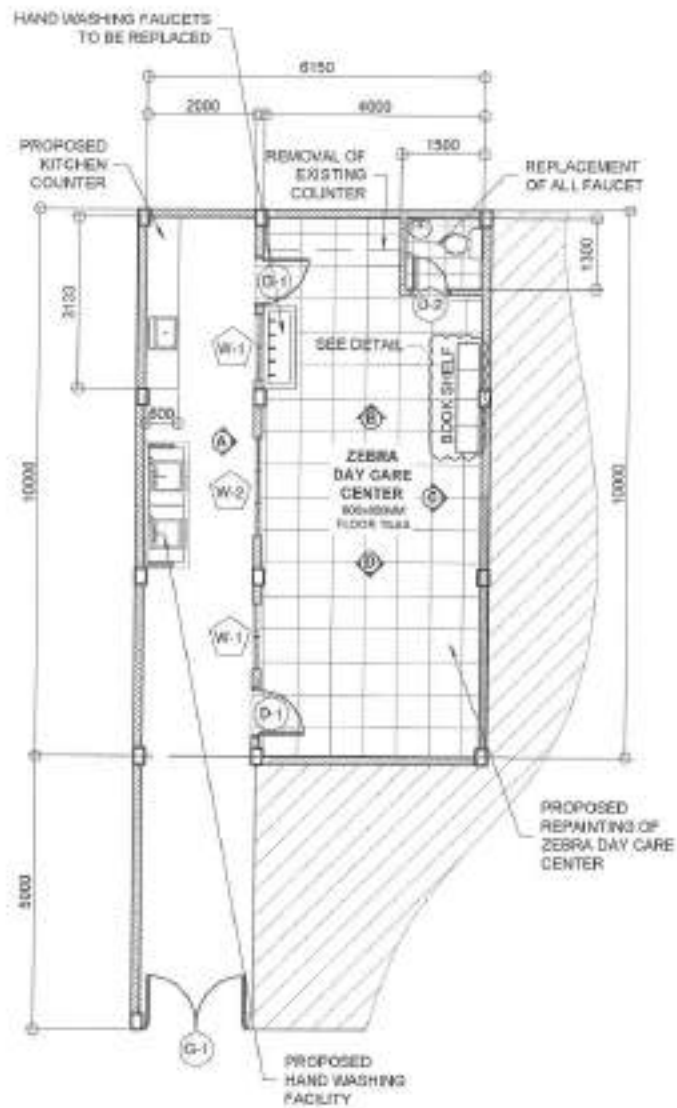
SHEET COUNT:

SITE DEVELOPMENT PLAN

SHEET NO.:

AR-02

02/11



## 1 FLOOR PLAN

SCALE: 1:100M

## 2 ROOF PLAN

SCALE: 1:100M

## 3 REFLECTED CEILING PLAN

SCALE: 1:100M



Republika ng Pilipinas  
Lungsod ng Quezon  
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:  
PROPOSED CONSTRUCTION OF HAND  
WASHING FACILITY AND REHABILITATION  
OF ZEBRA DAY CARE CENTER  
LOCATION:  
6907 HOLY SPIRIT, DISTRICT 6, QUEZON CITY

DRAWN BY: JM  
DATE: 8/12/2021  
CHECKED BY: JM  
REVISION NO:

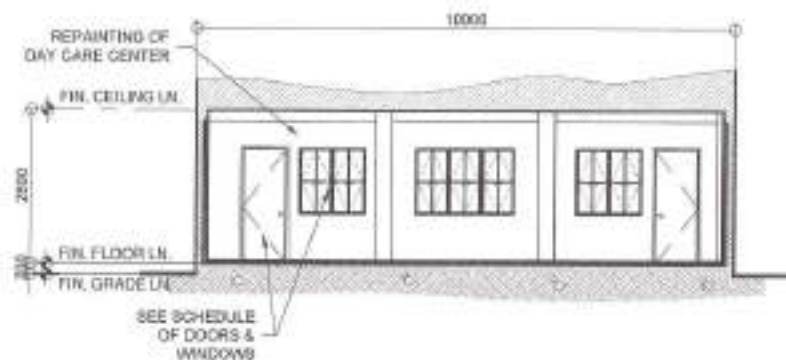
SUBMITTED BY:  
  
ENGR. LEO S. DEL ROSARIO  
HEAD, PLANNING & PROGRAM DEVELOPMENT

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

APPROVED BY:  
  
HON. MA. JOSEFINA G. BELMONTÉ  
CITY ENGINEER, QUEZON CITY

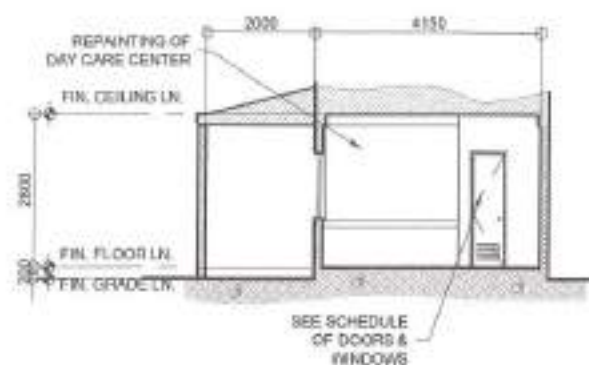
SHEET CONTENT:  
FLOOR PLAN  
ROOF PLAN  
REFLECTED CEILING PLAN

SHEET NO.  
AR-03  
03/11



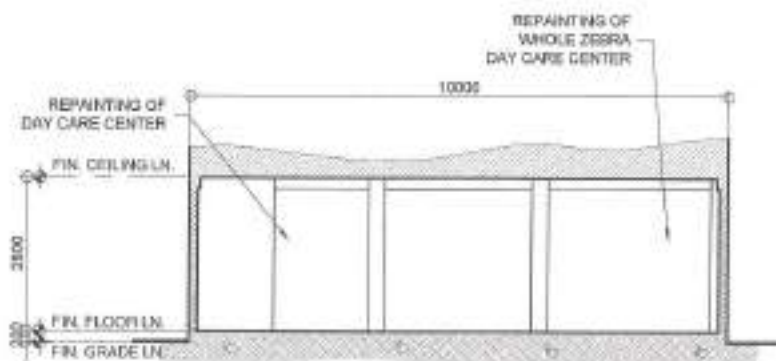
1 ELEVATION 'A'

SCALE: 1:100M



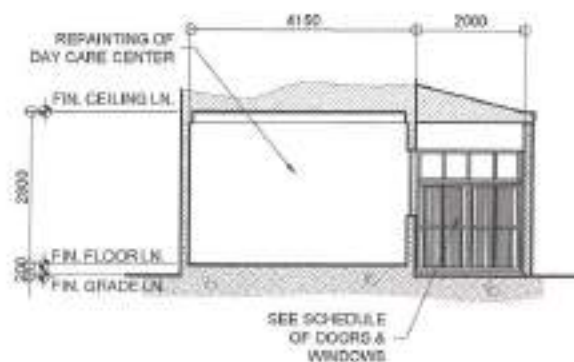
2 ELEVATION 'B'

SCALE: 1:100M



3 ELEVATION 'C'

SCALE: 1:100M



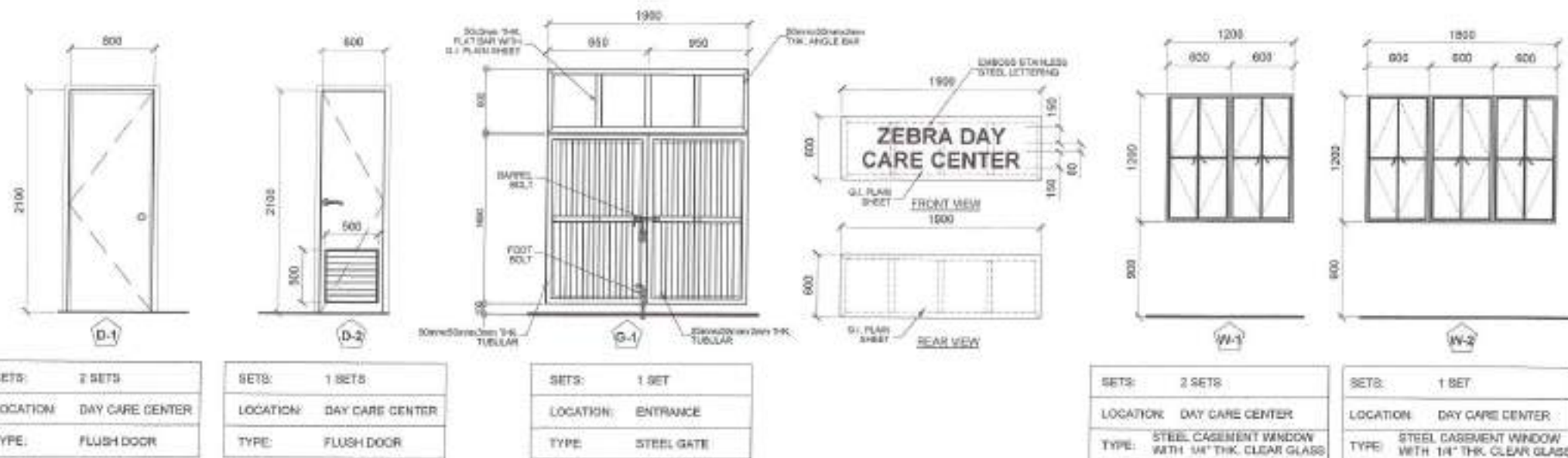
4 ELEVATION 'D'

SCALE: 1:100M



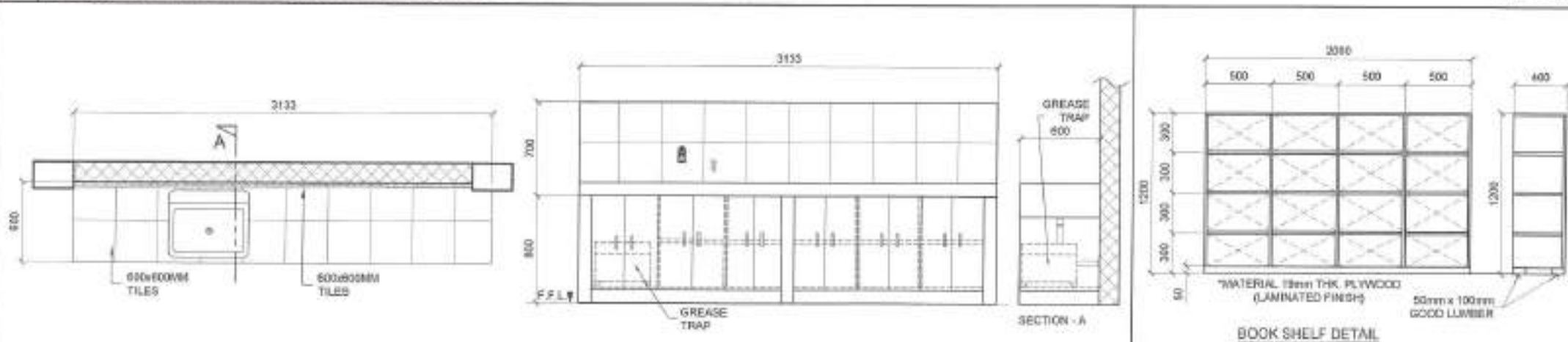
Republika ng Pilipinas  
Lungsod ng Quezon  
CITY ENGINEERING DEPARTMENT

| PROJECT TITLE  | DRAWN BY        | SUBMITTED BY   | RECOMMENDING APPROVAL   | APPROVED BY                                    | DIST. CONTROL  | SHEET NO.      |
|--|-----------------|--|---|--|--|----------------|
| PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF ZEBRA DAY CARE CENTER | JAN             | JAN  |   |  | ELEVATION 'A'<br>ELEVATION 'B'<br>ELEVATION 'C'<br>ELEVATION 'D' | AR-04<br>04/11 |
| LOCATION:<br>1807Y HOLY SPIRIT, DISTRICT 2, QUEZON CITY                                    | DATE: 8-22-2021 | ENGR. LEO S. DEL ROSARIO<br>HEAD, PLANNING PROGRAMS DIVISION | ENGR. JOSEFA R. VERZOSA, JR.<br>DISTRICT ENGINEERING SUPERVISOR | HON. MA. JOSEFINA G. BELMONTE<br>CITY ENGINEER |  |                |



## 1 SCHEDULE OF DOORS & WINDOWS

SCALE: 1:40M



## 2 COUNTER TOP DETAIL

SCALE: 1:40M

## 3 BOOK SHELF DETAIL

SCALE: 1:30M



Republika ng Pilipinas  
 Lungsod ng Quezon  
**CITY ENGINEERING DEPARTMENT**

PROJECT TITLE:  
**PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF ZEBRA DAY CARE CENTER**

LOCATION:  
 BRGY. HOLY SPIRIT, DISTRICT 2, CALZADANGIY

DRAWN BY: **LMR**  
 DATE: **8/11/2021**  
 CHECKED BY: **MR**  
 REVISION NO.:

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

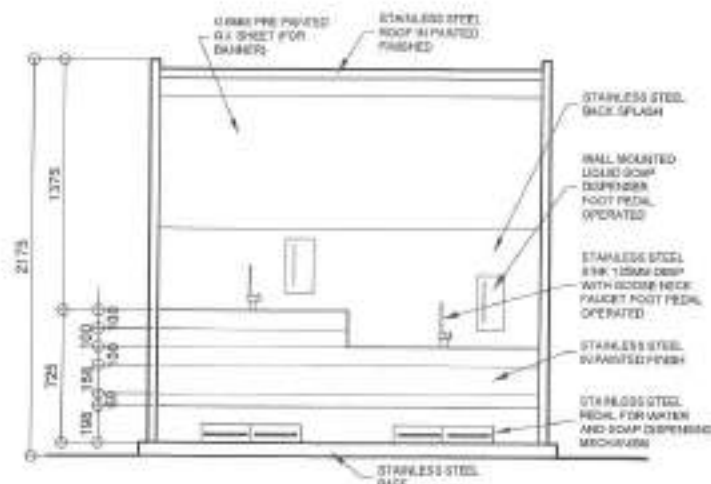
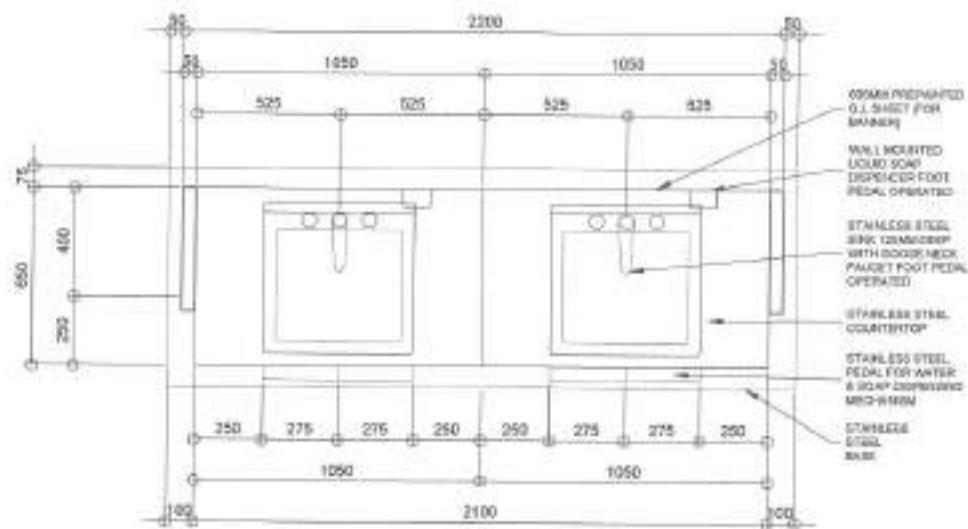
RECOMMENDING APPROVAL:  
**ENGR. RAFAEL R. VERZOSA, JR.**  
 DIC, CITY ENGINEERING DEPARTMENT

APPROVED BY:  
**HON. MA. JOSEFINA G. BELMONTE**  
 CITY MAYOR, QUEZON CITY

SHEET CONTENT:  
 SCHEDULE OF DOORS & WINDOWS  
 COUNTER TOP DETAIL  
 BOOK SHELF DETAIL

SHEET NO.  
**AR-05**  
**05/11**



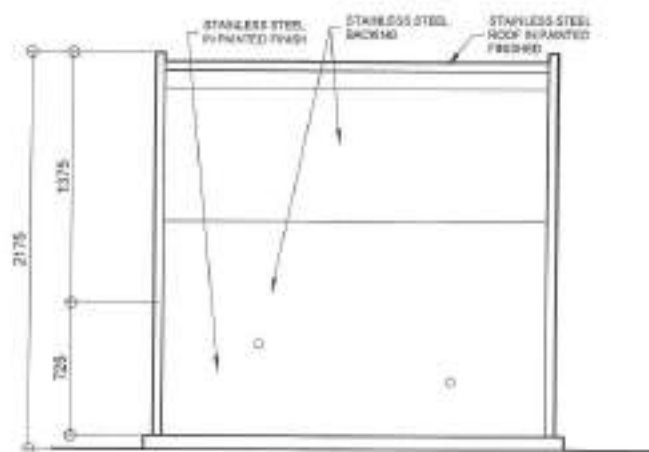


1 PLAN

SCALE: 1:30M.

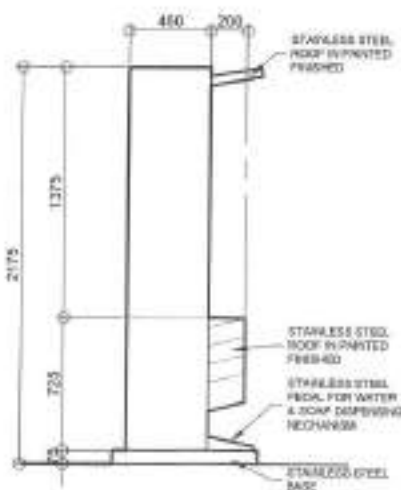
3 FRONT ELEVATION

SCALE: 1:30M.



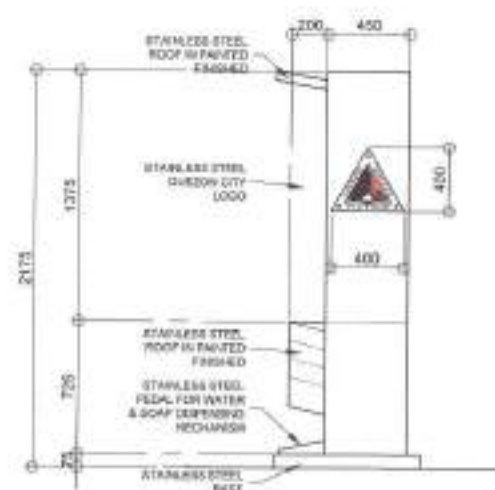
3 REAR ELEVATION

SCALE: 1:30M.



3 LEFT SIDE ELEVATION

SCALE: 1:30M.



3 RIGHT SIDE ELEVATION

SCALE: 1:30M.



Republika ng Pilipinas  
Lungsod ng Quezon  
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:  
**PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF ZEBRA DAY CARE CENTER**

LOCATION:  
DRY, HOLY SPIRIT, DISTRICT 2, QUEZON CITY

DRAWN BY: **WJ**  
DATE: **6-11-2021**  
CHECKED BY: **JMK**  
REVISION NO.:

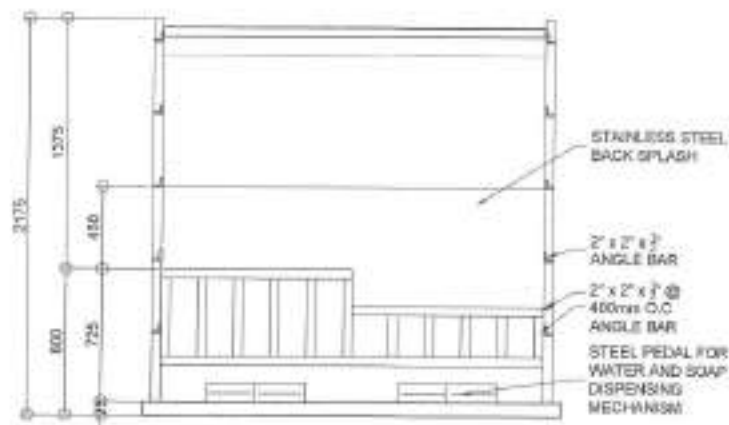
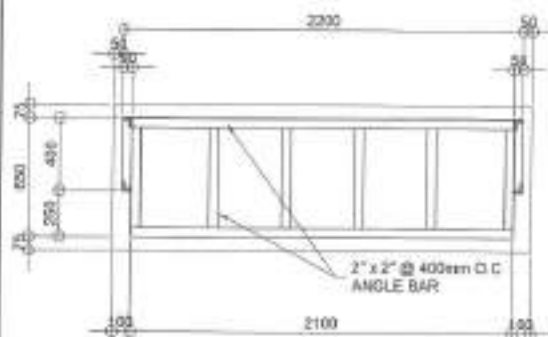
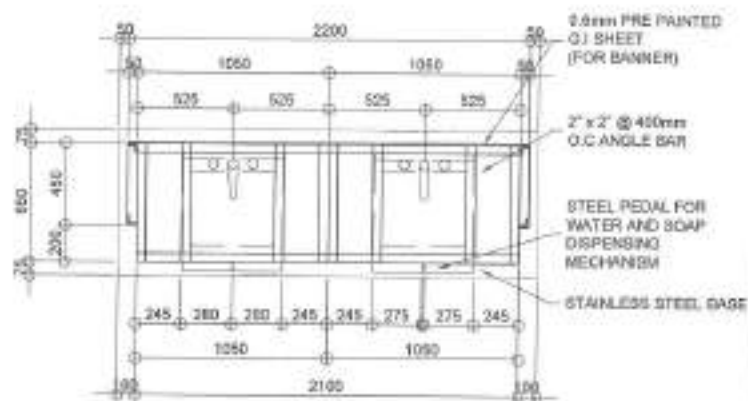
SUBMITTED BY:  
  
**ENGR. LEO S. DEL ROSARIO**  
HEAD, PLANNING & PROGRAMMING DIVISION

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

APPROVED BY:  
  
**HON. MA. JOSEFINA G. BELMONTE**  
CITY MAJOR, QUEZON CITY

SHEET CONTENT:  
PROPOSAL DETAILS

SHEET NO.:  
**AR-06**  
**06/11**



## 1 PLAN

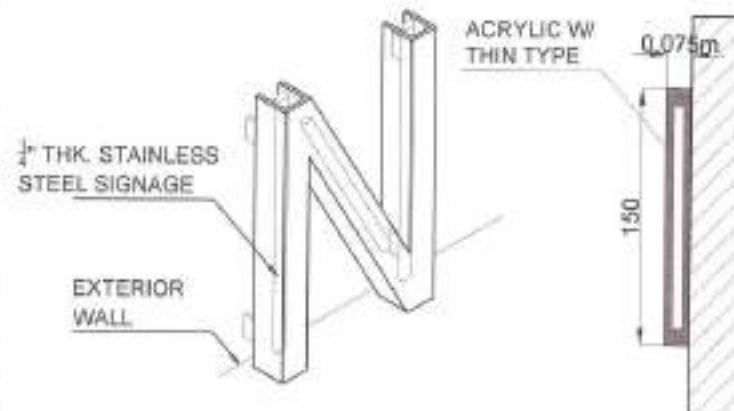
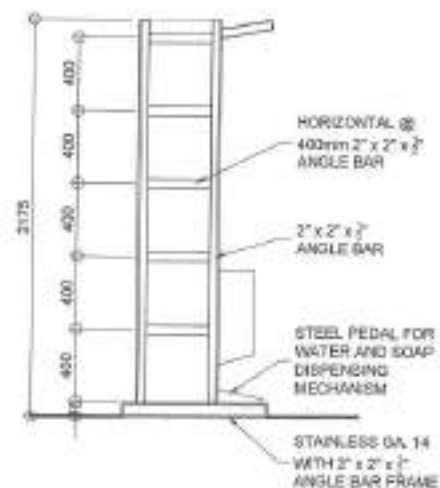
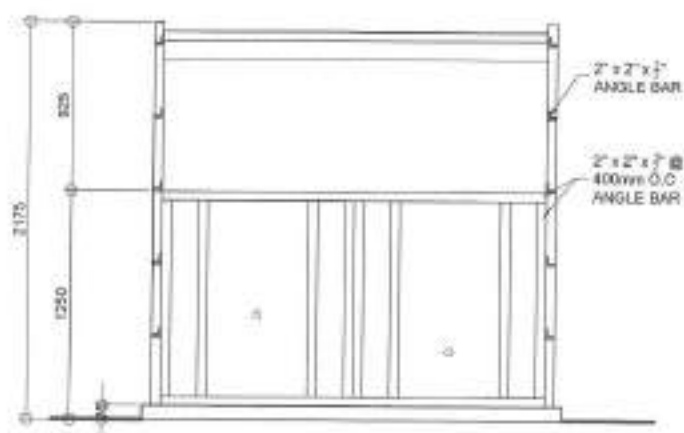
SCALE: 1:20M

## 2 FRAMING PLAN

SCALE: 1:20M

## 3 SECTION (FRONT)

SCALE: 1:30M



## 4 SECTION (REAR)

SCALE: 1:30M

## 5 SECTION (SIDE)

SCALE: 1:40M

## 6 STANDARD LOGO DETAILS

SCALE: NTS



Republika ng Pilipinas  
Lungsod ng Quezon  
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:  
PROPOSED CONSTRUCTION OF HAND  
WASHING FACILITY AND REHABILITATION  
OF ZEBRA DAY CARE CENTER

LOCATION:  
BRGY. HOLY SPIRIT, DISTRICT 2, QUEZON CITY

DESIGNED BY: *MA*

DATE: 8.22.2021

CHECKED BY: *Jm*

REVISION NO.:

SUBMITTED BY: *MA*

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

RECOMMENDING APPROVAL:

ENGR. JOYDAM R. VERZOSA, JR.  
CITY ENGINEERING DEPARTMENT

APPROVED BY:

HON. MA. JOSEFINA O. BELMONTE  
CITY MAYOR, QUEZON CITY

SHEET CONTENT:  
HAND WASHING DETAILS  
(STRUCTURAL)  
STANDARD LOGO  
DETAILS

SHEET NO.:

ST-01  
07/11

**GENERAL NOTES:**

1. ALL 3/4" PLUMBING SANITARY WORKS AND JOOD-HARDEN SHALL BE EXECUTED ACCORDING TO THE PROVISIONS OF THE PHILIPPINE PLUMBING CODE, THE NATIONAL BUILDING CODE, RULES AND REGULATIONS OF SUCCESS CITY.
2. COORDINATE THE DRAWING WITH OTHER RELATED DRAWINGS AND SPECIFICATIONS REQUIRED THEREON. WORK SHALL BE COMPLETED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.
3. ALL PIPES SHALL BE INSTALLED AS SHOWN OR PLUMBING RELOCATION REQUIRED BY PROPER EXECUTION OF OTHER TRADES SHALL BE WITH PROPER APPROVAL OF THE ENGINEER OF CONTRACTS.
4. PROPOSED SANITARY UTILITIES SHALL BE CONFORM TO THE NORMAL LOCATION, DEPTH AND SPACING OF ALL EXISTING STRUCTURES AND PIPES AS SHOWN BY THE CONTRACTOR.
5. ALL SLATES FOR WIRE SIZES, DRAINAGE SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.
6. SIZES OF WATER SUPPLY PIPES TO HOUSE SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.
7. THE CONTRACTOR SHALL VERIFY ALL EXISTING UTILITIES AT SITE AND COORDINATE THE WORK WITH THE WATER SUPPLY DIVISION, PORT AND WATER LINE SERVICE CONNECTIONS.
8. ALL WATER PIPES AND WATER TREATMENT, BE THOROUGHLY FLUSHED AND DISINFECTED WITH CHLORINE DISINFECTANT SOLUTION.
9. ALL WATER PIPES SHALL BE HYDROSTATICALLY TESTED TO A PRESSURE 10% ABOVE THE OPERATING PRESSURE OF THE SYSTEM.
10. ALL SANITARY AND DRAINAGE PIPES SHALL BE PROPERLY TESTED AT LEAST 30 DAYS BEFORE OCCUPANCY OF THE SYSTEM AND WATER TIGHT.
11. ALL DIMENSIONS ARE IN METERS AND ALL PIPES SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS.
12. ALL PIPES NOTED ON PLANS REFER TO PIPES ABOVE DIAMETER.

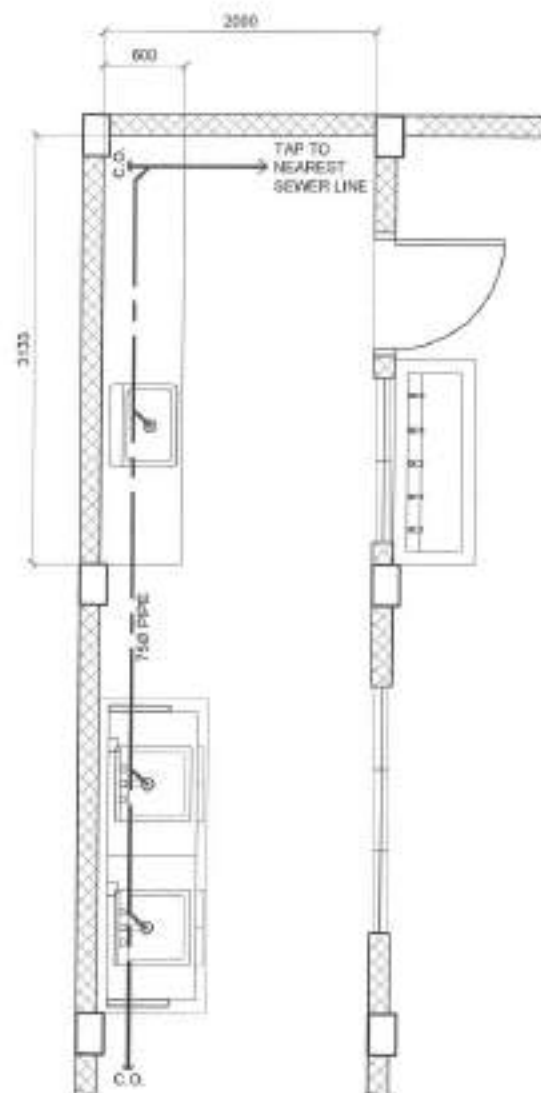
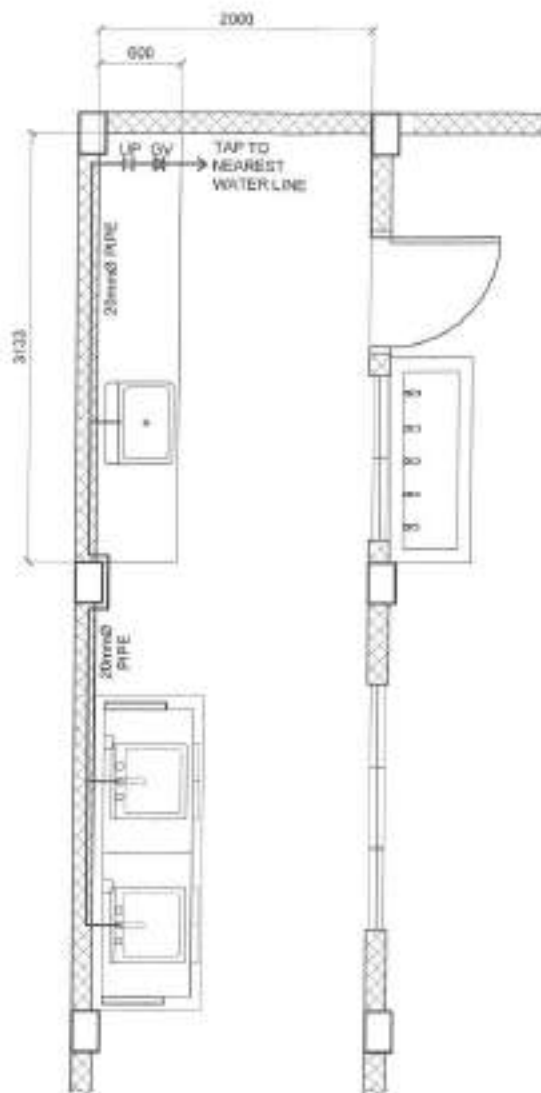
**1 GENERAL NOTES**

**I. SEWER/WASTE AND VENT SYSTEM**

|     |  |   |    |                   |
|-----|--|---|----|-------------------|
| —●— | 20" PVC WASTE PIPES                        | ● | 60 | SOIL STACK        |
| —○— | 10" PVC VENT PIPE / VENT AT CEILING        | ○ | 70 | FLOOR DRAIN       |
| —□— | 10" STORM DRAIN PIPE                       | □ | 80 | CHUTE DRAIN       |
| —○— | 100% GCS FLOOR CLEANOUT / SPECIAL CLEANOUT | ○ | A3 | AREA DRAIN        |
| —□— | 100% GCS DRAIN CLEANOUT                    | □ |    | STALL TYPE URINAL |
| ●   | 36" BRASS STACK / ROOF TOP                 | □ | UT | GREASE TRAP       |
| ○   | VENT THROUGH ROOF THROUGH ROOF             |   |    |                   |

**II. WATER DISTRIBUTION SYSTEM**

|     |                  |
|-----|------------------|
| —○— | COLD WATER LINE  |
| ●   | COLD WATER VALVE |
| □   | WATER VALVE      |
| —□— | WATER METER      |
| —□— | BACK VALVE       |
| —□— | WATER METER      |
| —○— | WATER DRAIN      |



**2 LEGEND AND SYMBOLS**

SCALE: NTS

**4 WATERLINE LAYOUT**

SCALE: 1:100M

**3 WASTE/ SEWER LAYOUT**

SCALE: 1:100M



Republic of the Philippines  
Lungsod ng Quezon  
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:  
**PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF ZEBRA DAY CARE CENTER**

LOCATION:  
BISAY, HOLY SPIRIT, DISTRICT 2, QUEZON CITY

DESIGNED BY:  
DATE: 8/12/2021

CHECKED BY:  
REVISION NO.:

SUBMITTED BY:  
*[Signature]*  
**ENGR. LEO S. DEL ROSARIO**  
HEAD, PLUMBING PROGRAM DIVISION

RECOMMENDING APPROVAL:  
*[Signature]*  
**ENGR. JOSEAN R. VERZOGA, JR.**  
OC, CIVIL ENGINEERING DIVISION

APPROVED BY:  
**HON. MA. JOSEFINA G. BELMONTE**  
CITY MAJOR, QUEZON CITY

PROJECT CONTENT:  
GENERAL NOTES  
LEGEND AND SYMBOLS  
WATERLINE LAYOUT  
WASTE/SEWER LAYOUT

SHEET NO.:  
**PL-01**  
**08/11**



**GENERAL NOTES:**

- ALL ELECTRICAL WORKS SHALL BE DONE IN ACCORDANCE WITH THE PROVISIONS OF THE LATEST EDITION OF THE PHILIPPINE ELECTRICAL CODE, THE LAWS AND ORDINANCES OF THE LOCAL CODE ENFORCING AUTHORITIES AND THE REQUIREMENTS OF THE LOCAL POWER AND TELEPHONE UTILITY COMPANY.
- THE CONTRACTOR SHALL SECURE ALL PERMITS AND PAY ALL FEES REQUIRED FOR THE WORK AND SHALL FURNISH THE OWNER THROUGH THE ENGINEER, FINAL CERTIFICATES OF ELECTRICAL INSPECTION AND APPROVAL FROM PROPER GOVERNMENT AUTHORITIES FOR COMPLETION OF WORK.
- ALL OVERHEAD BRANCH CIRCUITS SHALL BE PVC CONDUITS AND FOR EXPOSED INSTALLATION SHALL BE SUPPORTED BY CONDUIT CLAMPS EVERY 750 MILLIMETER.
- PULL BOXES SHALL BE PROVIDED BY THE CONTRACTOR WHENEVER NECESSARY TO FACILITATE WIRE PULLING EVEN IF THESE ARE NOT INDICATED ON THE PLANS. SIZING OF ALL PULL BOXES SHALL BE COMPUTED BASED ON THE CODE REQUIREMENTS. SUBMIT SHOP DRAWINGS TO THE ENGINEER FOR APPROVAL PRIOR TO FABRICATION. LOCATION OF PULL BOXES SHALL BE APPROVED BY THE ARCHITECT/ENGINEER AND MUST BE REFLECTED ON THE "AS-BUILT" PLAN.
- ALL POWER OUTLETS AND SWITCHES SHALL BE GROUNDING TYPE WITH SMALL SLOTS FOR 200V.
- PROVIDE GROUND FAULT CURRENT INTERRUPTION CIRCUIT BREAKER FOR LOADS MARKED "GFI" ON THE PLAN.
- ALL METALLIC CONDUITS, CABINETS AND EQUIPMENT SHALL BE PROPERLY GROUNDED AND BONDED.
- UNLESS OTHERWISE NOTED, MOUNTING HEIGHT FOR WALL MOUNTED DEVICES SHALL BE AS FOLLOWS:

RECEPTACLE OUTLET - 300 MM AFF, 100MM ABOVE WORKING SURFACE  
 TELEPHONE OUTLET - 300 MM AFF  
 CATHY OUTLET - 300 MM AFF  
 LIGHTING SWITCH - 1400 MM AFF  
 PANEL BOARD - 1800 MM AFF

- REFER TO MECHANICAL, PLUMBING AND FIRE PROTECTION DRAWINGS FOR READINGS AND LOCATIONS OF EQUIPMENT AS WELL AS THEIR CONTROL, SEQUENCING AS SPECIFIED AND OR SHOWN UNDER THEIR RESPECTIVE SECTIONS.
- ALL MATERIALS TO BE USED SHALL BE OF THE BEST QUALITY. BRAND NEW AS SPECIFIED.
- THE DRAWINGS AND SPECIFICATIONS ARE INTENDED TO PRESENT GENERAL LAYOUT AND GENERAL DESCRIPTION OF THE PROJECT BUT DO NOT NECESSARILY INDICATE DESCRIBED ACTUAL LOCATION, LEVEL AND DIMENSIONS OF THE EQUIPMENT. THE CONTRACTOR IS HEREBY REQUESTED TO MAKE SUCH ADJUSTMENT AT THE JOBSITE AS LOCAL CONDITIONS AND LEVELS ARE GOVERNED BY ACTUAL FIELD CONDITIONS.
- ANY DISCREPANCY BETWEEN THE PLANS AND CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR CLARIFICATION DECISION.
- ALL LIGHTING AND COMMUNICATION OUTLET CIRCUITS SHALL BE 1.5 SQ. MM. 74MMV COPPER WIRE UNLESS OTHERWISE NOTED. MINIMUM SIZE OF WIRE SHALL BE 1.5 SQ. MM. COPPER WIRE. ALL WIRING AND CABLES SHALL BE COLOR CODED AS FOLLOWS:

LINE 1 - RED  
 LINE 2 - YELLOW  
 NEUTRAL - WHITE  
 GROUND - GREEN

- BOXES, WIRE CUTTERS, ENCLOSURE SHALL BE FABRICATED FROM STEEL WITH THICKNESS AS FOLLOWS:  
 MAXIMUM WIDTH OF THE WIRE SURFACE (WTS):  
 UP TO INCLUDING 152.40 MM      GA 18 PAINTED WITH METAL PRIMER EPOXY AND TOPCOAT  
 OVER 152.40 MM BUT NOT OVER 406.40      GA 14 PAINTED WITH METAL PRIMER EPOXY AND TOPCOAT  
 OVER 406.40 MM BUT NOT OVER 761.91 MM      GA 12 PAINTED WITH METAL PRIMER EPOXY AND TOPCOAT  
 OVER 761.91 MM      GA 10 PAINTED WITH METAL PRIMER EPOXY AND TOPCOAT
- ALL ELECTRICAL WORKS HEREIN SHALL BE EXECUTED BY EXPERIENCED MEN UNDER THE DIRECT SUPERVISION OF A FULL-TIME LICENSED ELECTRICIAN, ENGINEER, AND A DULY ACCREDITED ELECTRICAL CONTRACTOR BY POWER WORKS SHALL BE NEATLY PLACED, SECURELY FASTENED AND PROPERLY FINISHED.
- TYPE OF SERVICE ENTRANCE SHALL BE SINGLE PHASE, TWO WIRE PLUS GROUND, 200V AC 60 HZ.
- CONDUITS AND CABLE SHALL THERE BE MORE THAN THE EQUIVALENT OF FOUR QUARTER BENDS IN ANY ONE RUN. ALL CONDUIT BENDS SHALL BE FIELD BENDS BY USING HYDRAULIC BENDERS. MINIMUM BENDING RADIUS MUST BE IN ACCORDANCE TO THE CODE REQUIREMENTS.
- UPON COMPLETION OF ELECTRICAL CONSTRUCTION WORK, INSULATION RESISTANCE TEST AND FUNCTIONALITY TEST SHALL BE PERFORMED BY THE CONTRACTOR INCLUSIVE OF THE INSTALLATION TO BE REPORTED IN DETAIL ON FORMS APPROVED BY THE QUEZON CITY ENGINEERING DEPARTMENT IMMEDIATELY. THE GROUND RESISTANCE FOR ELECTRICAL SYSTEMS SHALL NOT BE MORE THAN 5 OHMS. COMMUNICATION GROUNDING RESISTANCE SHALL NOT EXCEED 1 OHM.

|  |                                    |       |                     |
|--|------------------------------------|-------|---------------------|
|  | 150MM, ROUND RECESSED PINLIGHT     | PPA-6 | CIRCUIT HOMERUN     |
|  | 1200MM TS, 1' X 28W LED TUBE LIGHT | (M)   | KILOWATT-HOUR METER |
|  | 3 WAY SWITCH, 1 POLE (LIGHT)       |       | NEW CIRCUIT BREAKER |
|  | SINGLE POLE SWITCH (LIGHT)         |       | EMERGENCY LIGHT     |
|  | SELECTOR SWITCH (FAN)              | EXIT  | EXIT LIGHT          |
|  | DUPLEX CONVENIENCE OUTLET          | PPA   | PANEL BOARD         |

**2 LEGEND & SYMBOLS**

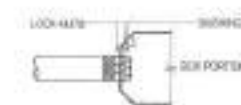
SCALE NTS



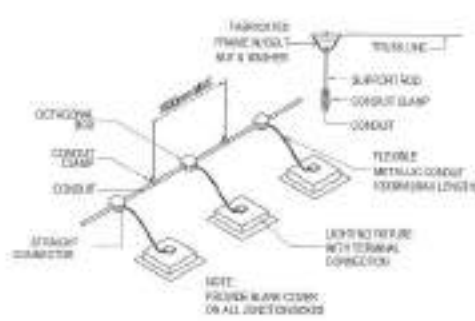
BENDING RADIUS DETAIL



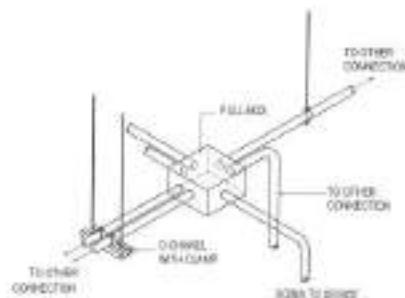
SPOT DETAIL OF CONDUIT RUN AND BOX



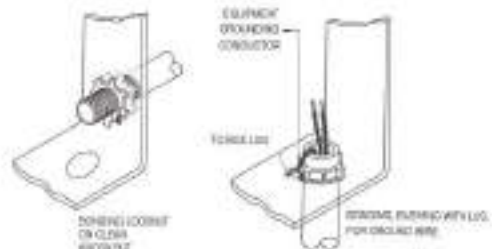
SPOT DETAIL OF CONDUIT RUN AND BOX



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



PROPER CONDUIT LAYOUT @ PULL BOX



BONDED RACEWAY TERMINATION FOR SHEET METAL

**1 GENERAL NOTES**

SCALE NTS

**3 MISCELLANEOUS DETAILS**

SCALE NTS



Republika ng Pilipinas  
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**CITY ENGINEERING DEPARTMENT**

PROJECT TITLE:  
**PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF ZEBRA DAY CARE CENTER**

LOCATION:  
 BRPT, HOLY SPIRIT, DISTRICT 2, QUEZON CITY

DRAWN BY: **MM**  
 DATE: 8/12/2021  
 CHECKED BY: **JM**  
 REVISION NO.:

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

RECOMMENDING APPROVAL:  
  
**ENGR. SAGOR R. VERZOSA, JR.**  
 CH. OF PLANNING DIVISION

APPROVED BY:  
  
**HON. MA. JOSEFINA G. BELMONTE**  
 CITY ENGINEER, QUEZON CITY

SHEET CONTENT:  
 GENERAL NOTES  
 LEGEND AND SYMBOLS  
 MISCELLANEOUS  
 DETAILS

SHEET NO.  
**EL-01**  
**09/11**



## PPA

| CKT.NO.              | LOAD DESCRIPTION                        | VOLT | POWER | CURRENT (AMPERE) | CIRCUIT BREAKER |    |   | WIRES AND CONDUIT      |                        |             |
|----------------------|---|------|-------|------------------|-----------------|----|---|------------------------|------------------------|-------------|
|                      |   |      |       |                  | AT              | AF | P | UNGRND                 | GROUND                 | MMØ         |
|                      |   |      |       |                  |                 |    |   | THHN                   | TW                     | Type        |
| 1                    | CONVENIENCE OUTLET                      | 230  | 1000  | 4.35             | 20              | 50 | 2 | 2 - 3.5mm <sup>2</sup> | 1 - 3.5mm <sup>2</sup> | 20 mm Ø PVC |
| 2                    | EXISTING                                | 230  | 3000  | 4.35             | 20              | 50 | 2 | 2 - 3.5mm <sup>2</sup> | 1 - 3.5mm <sup>2</sup> | 20 mm Ø PVC |
| 3                    | EXISTING                                | 230  | 3000  | 4.35             | 30              | 50 | 2 | 2 - 5.5mm <sup>2</sup> | 1 - 3.5mm <sup>2</sup> | 20 mm Ø PVC |
| 4                    | EXISTING                                | 230  | 1000  | 4.35             | 30              | 50 | 2 | 2 - 5.5mm <sup>2</sup> | 1 - 3.5mm <sup>2</sup> | 20 mm Ø PVC |
| 5                    | EXISTING                                | 230  | 1000  | 4.35             | 20              | 50 | 2 | 2 - 3.5mm <sup>2</sup> | 1 - 3.5mm <sup>2</sup> | 20 mm Ø PVC |
| 6                    | 12 - T5, 1 - PINLIGHT,<br>2 - ORBIT FAN | 230  | 1356  | 5.90             | 20              | 50 | 2 | 2 - 3.5mm <sup>2</sup> | 1 - 3.5mm <sup>2</sup> | 20 mm Ø PVC |
| 7                    | EXISTING                                | 230  | 1000  | 4.35             | 20              | 50 | 2 | 2 - 3.5mm <sup>2</sup> | 1 - 3.5mm <sup>2</sup> | 20 mm Ø PVC |
| TOTAL CONNECTED LOAD |   |      | 7356  | 27.63            |                 |    |   |                        |                        |             |

## CIRCUIT PROTECTION COMPUTATION:

$$I_T = (7356 / 230 \text{ V}) * 125\%$$

$$I_T = 39.98 \text{ ampere}$$

## OVER CURRENT PROTECTION:

USE: 60 AT, 2P CB BOLT-ON (EXISTING)

NOTE: REUSE PANEL BOARD

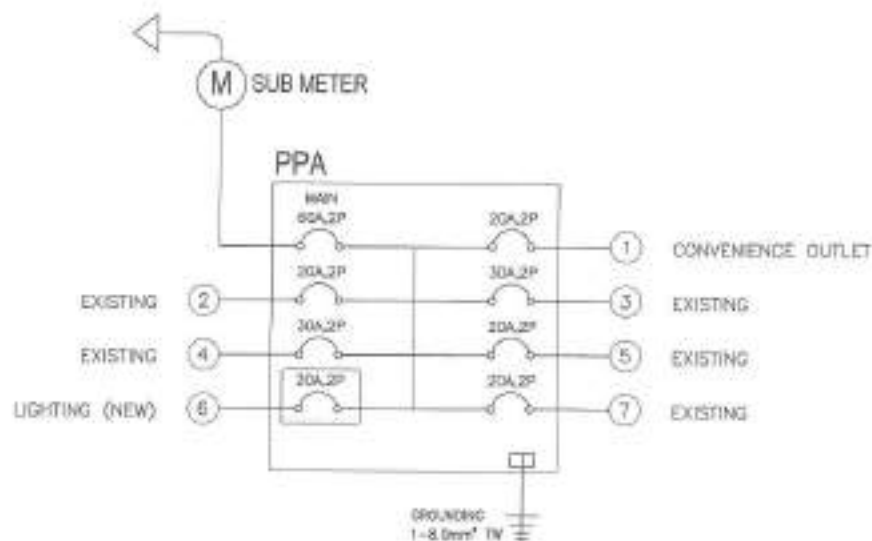
## MAIN FEEDER:

USE: 2 - 14mm<sup>2</sup> THHN WIRE & 1 - 8.0mm<sup>2</sup> TW GROUND WIRE

IN 25mm Ø IMC TYPE

## 1 LOAD SCHEDULE

SCALE: NTS



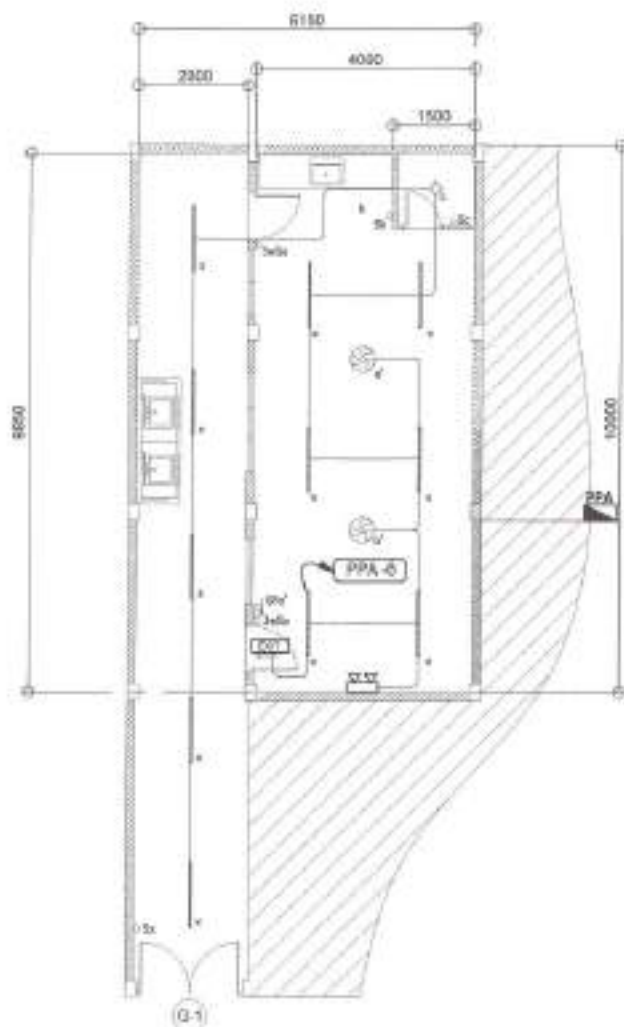
## 2 RISER DIAGRAM

SCALE: NTS



Republika ng Pilipinas  
Lungsod ng Quezon  
CITY ENGINEERING DEPARTMENT

| PROJECT TITLE:   | DRAWN BY: <input checked="" type="checkbox"/> MS    | SUBMITTED BY: | RECOMMENDING APPROVAL:   | APPROVED BY:   | SHEET CONTENT:   | SHEET NO.:     |
|--|---|---------------|--|--|--|----------------|
| PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF ZEBRA DAY CARE CENTER | DATE: 8.12.2021                                     |               |  |  | LOAD SCHEDULE<br>RISER DIAGRAM                           | EL-02<br>10/11 |
| LOCATION:<br>SHEET, HOLY SPIRIT, DISTRICT 2, QUEZON CITY                                   | DESIGNED BY: <input checked="" type="checkbox"/> MS | REVISION NO.: | ENGR. LEO S. DEL ROSARIO<br>HEAD, PLANNING & PROGRAMS DIVISION | ENGR. GASPAR R. VERZOSA, JR.<br>O.C. CITY ENGINEERING DEPARTMENT | HON. MA. JOSEFINA G. BELMONTE<br>CITY MAYOR, QUEZON CITY |                |



## 1 LIGHTING LAYOUT

SCALE: 1/75 MTS



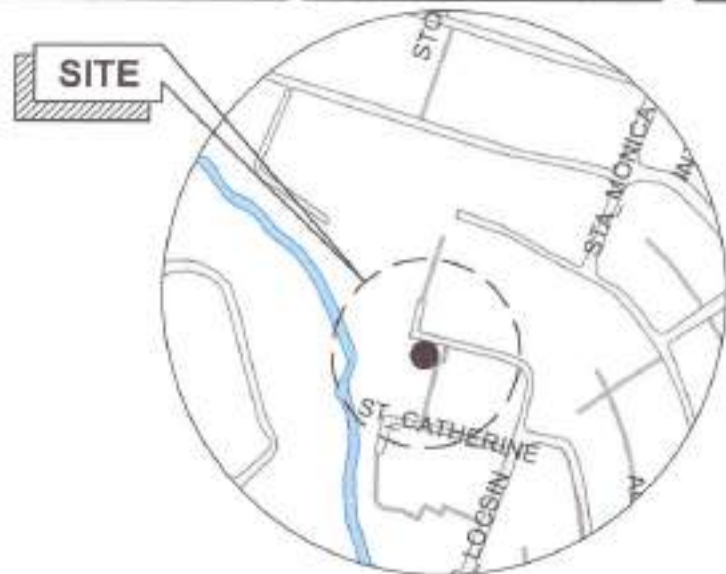
## 2 POWER LAYOUT

SCALE: 1/75 MTS



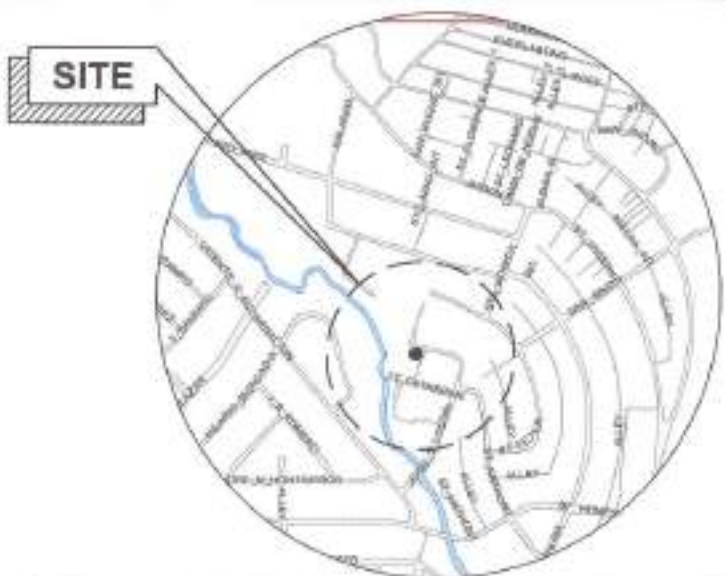
Republika ng Pilipinas  
Lungsod ng Quezon  
CITY ENGINEERING DEPARTMENT

| PROJECT TITLE:   | DRAWN BY:                          | SUBMITTED BY:   | RECOMMENDING APPROVAL:                                      | APPROVED BY:   | SHEET CONTENT:                  | SHEET NO.:    |
|--|------------------------------------|---|---|--|---------------------------------|---------------|
| PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF ZEBRA DAY CARE CENTER | DATE: 8.12.2021<br>CHECKED BY: JAF | ENGR. LEO S. DEL ROSARIO<br>HEAD, PLANNING & PROGRAMMING DIVISION | ENGR. ISMAEL R. VERZOSA, JR.<br>CITY ENGINEERING DEPARTMENT | HON. MA. JOSEFINA G. BELMONTE<br>CITY MAYOR, QUEZON CITY | LIGHTING LAYOUT<br>POWER LAYOUT | EL-03<br>1111 |
| LOCATION:<br>BPOY, HOLY SPIRIT, DISTRICT 2, QUEZON CITY                                    | REASONING:                         |   |   |  |                                 |               |



1 LOCATION MAP

SCALE: NTS



2 VICINITY MAP

SCALE: NTS

3 SITE DEVELOPMENT PLAN

SCALE: 1:3500

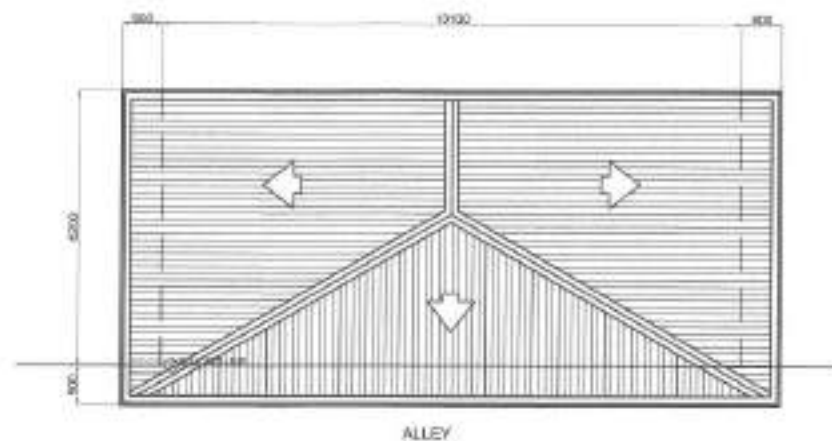
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## ARCHITECTURAL

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## STRUCTURAL

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| ST-2 | FIRE EXIT LADDER DETAILS               |



Republika ng Pilipinas  
Lungsod ng Quezon  
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:

PROPOSED REHABILITATION OF SAINT  
CATHERINE DAY CARE CENTER

LOCATION:  
BNDY HOLY SPIRIT DISTRICT 2, QUEZON CITY

DRAWN BY:

DATE: 4-18-2021

CHECKED BY:

REVISION NO.:

SUBMITTED BY:

ENGR. ED S. DEL ROSARIO  
HEAD, PLANNING & PREPARATION DIVISION

RECOMMENDATION APPROVAL:

ENGR. ISAGANI R. VERZOSA, JR.  
DCL, CIVIL ENGINEERING DEPARTMENT

APPROVED BY:

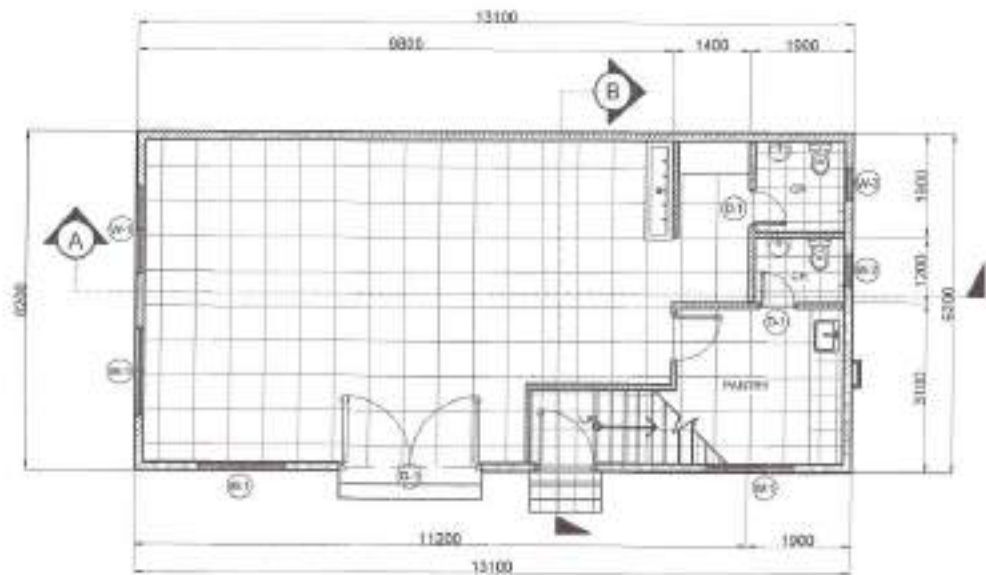
HON. NA. JOSEFINA G. BELMONTE  
CITY SECRETARY, QUEZON CITY

SHEET CONTENT:

VICINITY MAP  
LOCATION MAP  
SITE DEVELOPMENT PLAN

SHEET NO.:

AR-1  
01/06

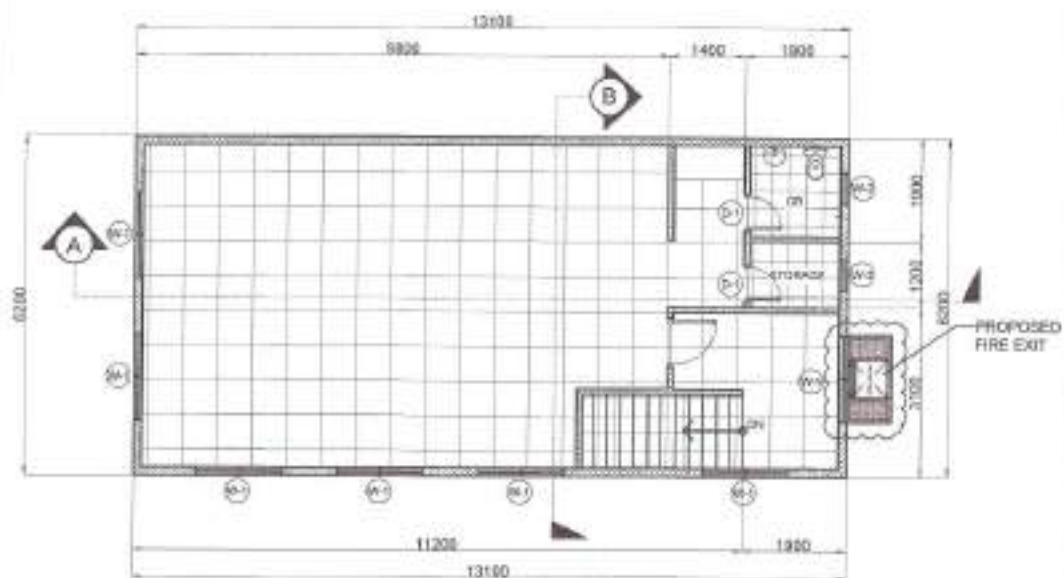


## NOTE:

- WHOLE STRUCTURE TO BE REPAINTED
- COMFORT ROOM DOORS TO BE REPLACED
- WINDOWS TO BE REPLACED
- MAIN DOOR GATE TO BE CONSTRUCTED
- HAND WASHING FAUCET TO BE REPLACED
- TERMITE TREATMENT TO BE APPLIED

## 1 GROUND FLOOR PLAN

SCALE: 1:50mm



## NOTE:

- WHOLE STRUCTURE TO BE REPAINTED
- COMFORT ROOM DOORS TO BE REPLACED
- WINDOWS TO BE REPLACED
- TERMITE TREATMENT TO BE APPLIED

## 2 SECOND FLOOR PLAN

SCALE: 1:50mm



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Lungsod ng Quezon  
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:

PROPOSED REHABILITATION OF SAINT  
CATHERINE DAY CARE CENTER

LOCATION:  
BESF, HOLY SPIRIT (DISTRICT 2), QUEZON CITY

DRAWN BY:

DATE: 8.12.2021

CHECKED BY:

REVISION NO.:

SUBMITTED BY:

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

RECOMMENDING APPROVAL:

ENGR. GABRIEL R. VERZOSA, JR.  
CITY ENGINEERING DEPARTMENT

APPROVED BY:

NON. MA. JOSEFINA G. BELMONTI  
CITY MARCH, QUEZON CITY

SHEET CONTENT:

GROUND FLOOR PLAN  
SECOND FLOOR PLAN

SHEET NO.:

AR-2  
02/06

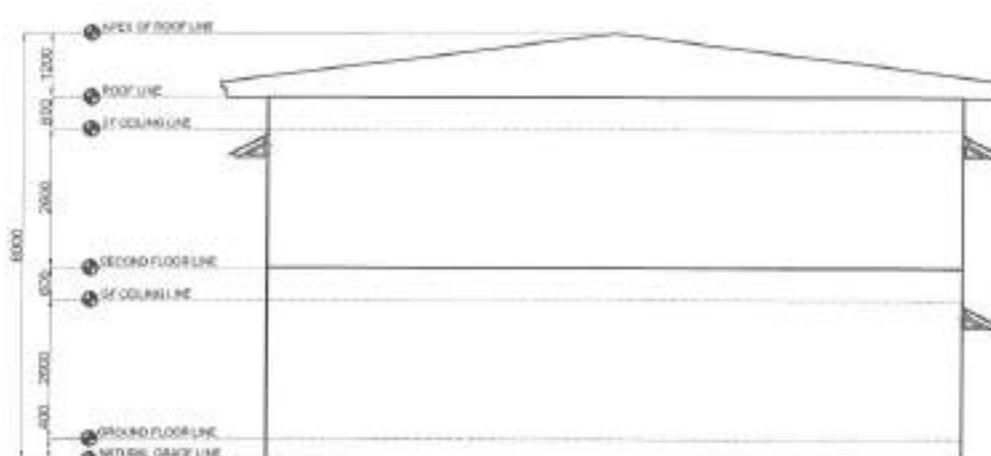




- NOTE
- WHOLE STRUCTURE TO BE REPAINTED
  - WINDOW CANOPY TO BE CONSTRUCTED

### 1 FRONT ELEVATION

SCALE: 1:100ms



### 2 REAR ELEVATION

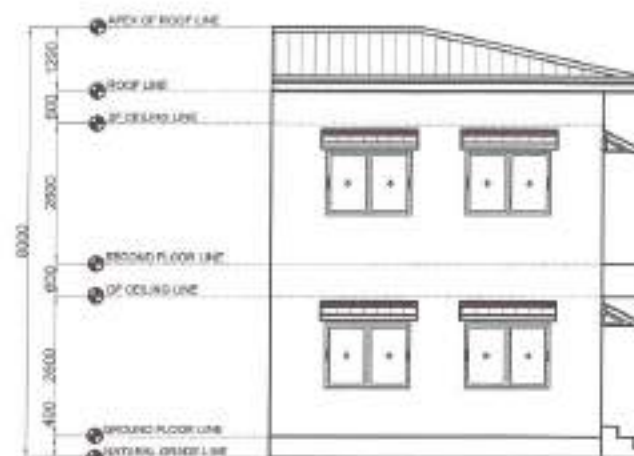
SCALE: 1:100ms



- NOTE
- WHOLE STRUCTURE TO BE REPAINTED
  - WINDOW CANOPY TO BE CONSTRUCTED

### 3 RIGHT SIDE ELEVATION

SCALE: 1:100ms



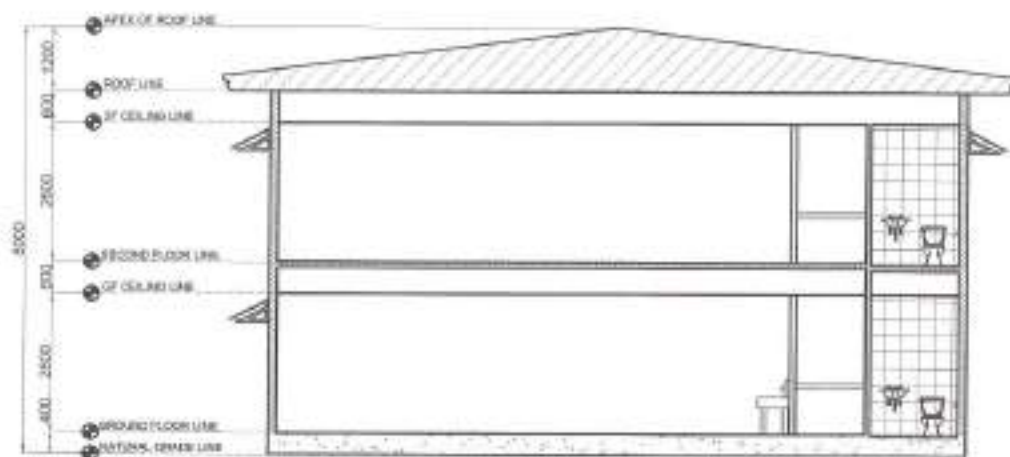
### 4 LEFT SIDE ELEVATION

SCALE: 1:100ms

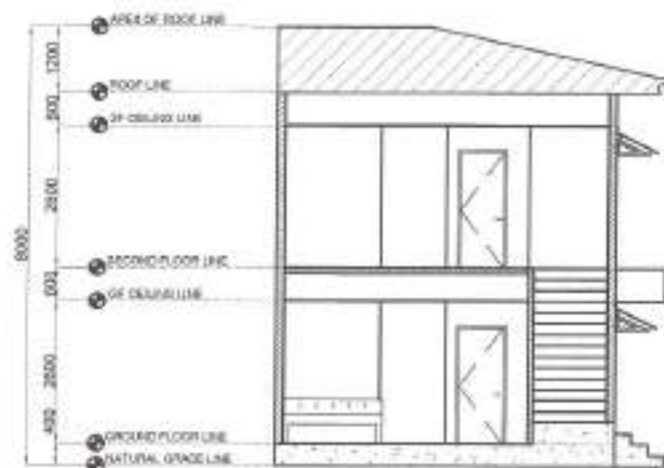


Republika ng Pilipinas  
Lungsod ng Quezon  
CITY ENGINEERING DEPARTMENT

| PROJECT TITLE  | DRAWN BY                           | SUBMITTED BY   | RECOMMENDING APPROVAL   | APPROVED BY  | SHEET CONTENT  | SHEET NO.     |
|--|------------------------------------|--|---|--|--|---------------|
| PROPOSED REHABILITATION OF SAINT CATHERINE DAY CARE CENTER | DATE: 8.18.2021<br>CHECKED BY: JAC | ENGR. LEO S. DEL ROSARIO<br>HEAD, PLANNING & PROJECTS DIVISION | ENGR. SARAH R. VERZOSA, JR.<br>D.D. CITY ENGINEERING DEPARTMENT | HON. MA. JOSEFINA G. BELMONTÉ<br>CITY MAYOR, QUEZON CITY | FRONT ELEVATION<br>REAR ELEVATION<br>LEFT SIDE ELEVATION<br>RIGHT SIDE ELEVATION | AR-3<br>03/06 |
| LOCATION:<br>807, HOLY SPIRIT DISTRICT 7, QUEZON CITY      | REVISION NO.:                      |  |   |  |  |               |

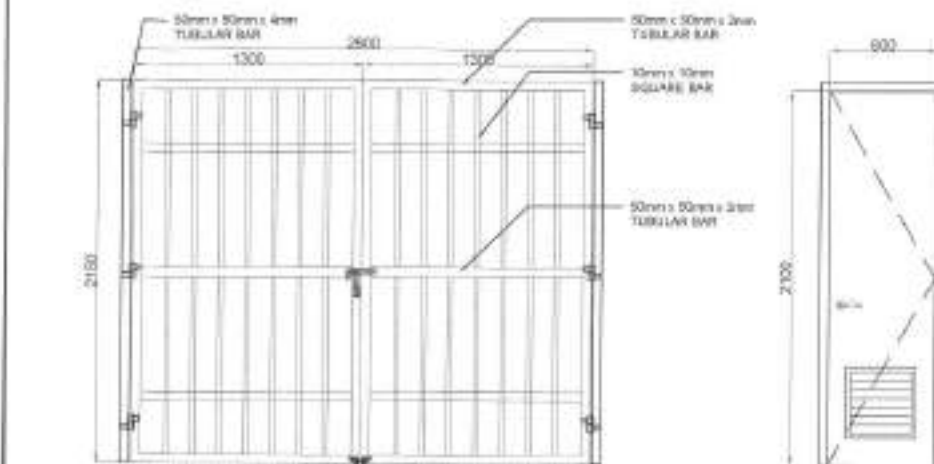


1 SECTION THRU "A"

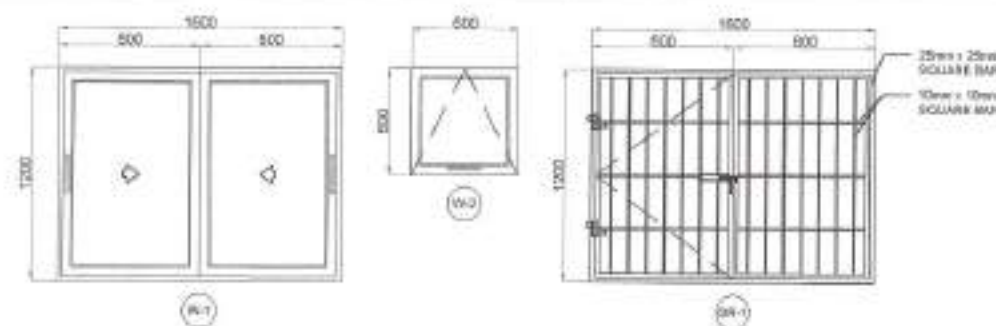


2 SECTION THRU "B"

SCALE: 1:50mm



|                    | D-1  | D-1                       |
|--------------------|--|---------------------------|
| LOCATION           | MAIN DOOR  | COMFORT ROOMS AND STORAGE |
| SPECIFICATIONS     | 50mm x 50mm x 3mm THICK TUBULAR BAR WITH 10mm x 10mm VERTICAL SQUARE BAR | PVC DOOR WITH LOUVER      |
| HARDWARE / GLAZING | HEAVY DUTY HINGES, FOOT BOLT AND BARREL BOLT                             | COMPLETE ACCESSORIES      |
| NO. OF SETS        | 1  | 4                         |



|                    | W-1                     | W-2                       | GR-1   |
|--------------------|-------------------------|---------------------------|--|
| LOCATION           | DAY CARE                | COMFORT ROOMS AND STORAGE | FIRE EXIT WINDOW GRILLES                           |
| SPECIFICATIONS     | ALUMINUM SLIDING WINDOW | ALUMINUM AWNING WINDOW    | 25mm x 25mm SQUARE BAR WITH 10mm x 10mm SQUARE BAR |
| HARDWARE / GLAZING | COMPLETE ACCESSORIES    | COMPLETE ACCESSORIES      | HEAVY DUTY BARREL BOLT AND HINGES                  |
| NO. OF SETS        | 11                      | 4                         | 1  |

3 SCHEDULE OF DOORS AND WINDOWS

SCALE: 1:30mm



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 SAINT CATHERINE DAY CARE CENTER | DWE: ELS/091 |  |  |  | SECTION THRU "A"<br>SECTION "B"<br>SCHEDULE OF DOORS AND WINDOWS | AR-4<br>04/06 |
| LOCATION<br>BPOF HOLY SPIRIT DISTRICT 2, QUEZON CITY       | CHECKED BY   | ENGR. LEO S. DEL ROSARIO<br>RME, PLANNING & PROGRAMMING DIVISION | ENGR. JOSEPH R. VERZOSA, JR.<br>D.C. CITY ENGINEERING DEPARTMENT | MOR. MA. JOSEFINA G. BELMONTE<br>CITY ENGINEER - QUEZON CITY |  |               |

NOTE  
\* WHOLE STRUCTURE TO BE REPAINTED

**GENERAL**

- CONTRACTOR SHALL VERIFY AND VERIFY DETAILS APPLY TO ALL CONDITIONS UNLESS OTHERWISE SHOWN OR NOTED. VERIFY TYPICAL DETAILS MODIFIED TO MEET SPECIAL CONDITIONS.
- ALL WORKMANSHIP SHALL BE SUBJECT TO INSPECTION BY ALL STRUCTURAL FOR CONSTRUCTION APPROVAL BEFORE PROCEEDING.
- CONTRACTOR SHALL VERIFY ALL DIMENSIONS BEFORE ALL WORK. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE ADEQUATE PROTECTION AND BRACING OF THE STRUCTURE FOR ALL LOADS THAT MAY BE APPLIED DURING CONSTRUCTION.
- IN CASE OF DISCREPANCY ARISING FROM THE INTERPRETATION OF CONFLICTING DRAWING DOCUMENTS, THE ATTENTION OF THE CONTRACTOR SHALL BE CALLED TO THE ATTENTION.

**CONCRETE & REINFORCEMENT**

- ALL MATERIALS AND WORKMANSHIP SHALL CONFORM WITH THE LATEST BUILDING CODE OF APPLICABLE CONDITIONS UNLESS OTHERWISE NOTED.
- ALL CONCRETE SHALL BE OF A MINIMUM COMPRESSIVE STRENGTH AT THE END OF 28 DAYS (MAY VARY WITH CORRESPONDING PROVISIONS AS APPROVED BY THE ENGINEER AS FOLLOWS):

| LOCATION                                       | STRENGTH            | MIN. SIZE OF AGGREGATE | MIN. SLUMP |
|--|---------------------|------------------------|------------|
| a. SLAB ON GROUND (SLOPE PROVISIONS) (FOOTING) | 3000 PSI (20.7 MPa) | 1/4" (6mm)             | 4" (100mm) |
| b. BEAMS, COLUMNS, CORNER CONNECTIONS          | 4000 PSI (27.6 MPa) | 3/4" (19mm)            | 4" (100mm) |
| c. CONCRETE IN WALLS                           | 3500 PSI (24.1 MPa) | 1/2" (13mm)            | 4" (100mm) |

- ALL REINFORCEMENT SHALL BE OF A MINIMUM TENSILE STRENGTH OF 60,000 PSI (413.7 MPa) FOR 12-16mm AND 60,000 PSI (413.7 MPa) FOR 18-20mm UNLESS OTHERWISE NOTED.
- IN GENERAL, THE LATEST EDITION OF ANY OF THE STANDARD PRACTICES DESCRIBED IN REINFORCED CONCRETE STRUCTURES SHALL BE APPLICABLE UNLESS OTHERWISE NOTED.

- MINIMUM REINFORCED CONCRETE COVER FOR REINFORCEMENT, AS FOLLOWS:

|                                 |      |
|---------------------------------|------|
| CONCRETE COVER TO EXPOSED REBAR | 75mm |
| SLAB ON GROUND                  | 25mm |
| SLAB ON GRADE                   | 25mm |
| WALLS ABOVE GRADE               | 25mm |
| BEAMS & COLUMNS                 | 40mm |

- SPACERS SHALL BE USED TO MAINTAIN THE COVER OF ALL SLABS OR OTHER REINFORCED CONCRETE. THE THICKNESS OF SPACERS SHALL BE AS SPECIFIED IN THE DRAWINGS. SPACERS SHALL BE STAGGERED WHENEVER POSSIBLE.

- ALL ANCHOR BOLTS, CORNERS, AND OTHER DETAILS SHALL BE PROPERLY POSITIONED AND ANCHORED IN PLACE PRIOR TO PLACING OF CONCRETE.

- CONTRACTOR SHALL NOTE AND PROVIDE ALL NECESSARY CORRECTIONS, SLITS, STOPS, REINFORCEMENT AND MECHANICAL SPACES THAT ARE DEMAND BY THE ARCHITECT, ELECTRICAL, AND MECHANICAL DRAWINGS.

- ALL CONCRETE SHALL BE SET READY FOR A MINIMUM OF 7 DAYS BEFORE DAYS IMMEDIATELY AFTER POURING BY THE USE OF PLY BURLAP, POLYPROPYLENE CURB AND CURBING OR OTHER APPROVED METHODS.

- FORMS FOR CONCRETE SHALL BE:

|                              |         |
|------------------------------|---------|
| CONCRETE                     | CURBING |
| FORMWORK                     | 20mm    |
| SLAB ON GROUND               | 50mm    |
| ADDITIONAL LOADS ARE APPLIED | 25mm    |
| BEAMS, COLUMNS, WALLS        | 25mm    |
| ROOF                         | 25mm    |

- COVER SHALL BE MAINTAINED FOR ALL PARTS OF THE STRUCTURE AS SPECIFIED IN THE DRAWINGS.

**STRUCTURAL STEEL AND PLATES**

- ALL STRUCTURAL STEEL SHALL CONFORM TO THE LATEST SPECIFICATION WITH MINIMUM TENSILE STRENGTH 430 MPa.
- ANCHOR BOLT AND NUTS: ALL BOLTS SHALL CONFORM TO ASTM A307 SPECIFICATION.
- ANCHOR BOLT: ALL WELDING SHALL BE AS SPECIFIED IN THE DRAWINGS. WELDING SHALL BE PERFORMED BY A WELDER WITH MINIMUM WELDING STRENGTH 430 MPa.

**FOUNDATION**

- FOUNDATION IS BEARING BASED ON NATURAL SOILS WITH THE USE OF THE ALLOWABLE SOIL BEARING CAPACITY OF 200 kPa.

- FOUNDATION SHALL REST ON NATURAL SOIL. LOADS ON FOUNDATION BY THE DESIGNER AND NOT OF THE FOUNDATION SHALL REST ON SOIL.

- THE CONTRACTOR SHALL NOTIFY THE ENGINEER UPON COMPLETION OF FOUNDATION CONSTRUCTION FOR FACILITY USE. CONDITIONS WHICH DO NOT CONFORM TO THE SOIL BEARING CAPACITY SHALL BE RECORDED.

**MASONRY WALLS**

- ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE APPLICABLE CODES AND SPECIFICATIONS OF THE ENGINEERING CODE OF THE PHILIPPINES & INTERNATIONAL CODE.

- REQUIREMENTS FOR ALL CONCRETE MASONRY WALLS CONFORM TO ASTM 905. THIS WALL SHALL HAVE A MINIMUM OF 20% OF STANDARD CYCLIC COMPRESSIVE STRENGTH OF 0.33 MPa.

- ALL WALLS SHALL BE LAID OUT WITH THE CELLS UNREINFORCED UNTIL COMPLETION OF ALL CELLS. REINFORCEMENT SHALL BE INSTALLED AFTER MORTAR.

- REINFORCEMENT AS SPECIFIED IN THE DRAWINGS SHALL BE INSTALLED UPON COMPLETION OF ALL CELLS.

- ALL MASONRY WALLS SHALL BE PROVIDED WITH STEEL REINFORCEMENT AS REQUIRED.

- FOR HIGH WALLS (EXCEEDING 3000 mm) OR WALLS HAVING 1000 mm OR MORE IN HEIGHT:

- FOR DOORS & WINDOWS OPENING PROVIDE CURTAIN WALLS AS SPECIFIED IN THE DRAWINGS.

- FOR DOORS & WINDOWS OPENING PROVIDE CURTAIN WALLS AS SPECIFIED IN THE DRAWINGS.

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- FOR DOORS & WINDOWS OPENING PROVIDE CURTAIN WALLS AS SPECIFIED IN THE DRAWINGS.

**1 GENERAL NOTES**

NOT TO SCALE

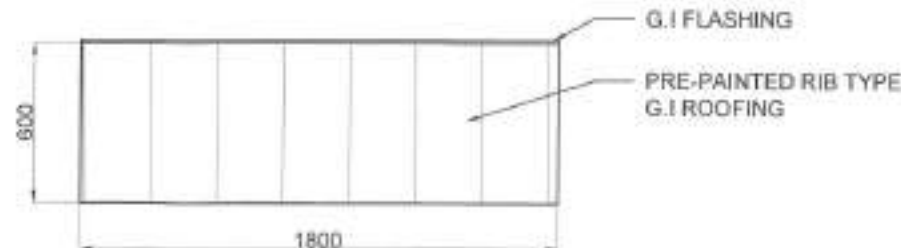
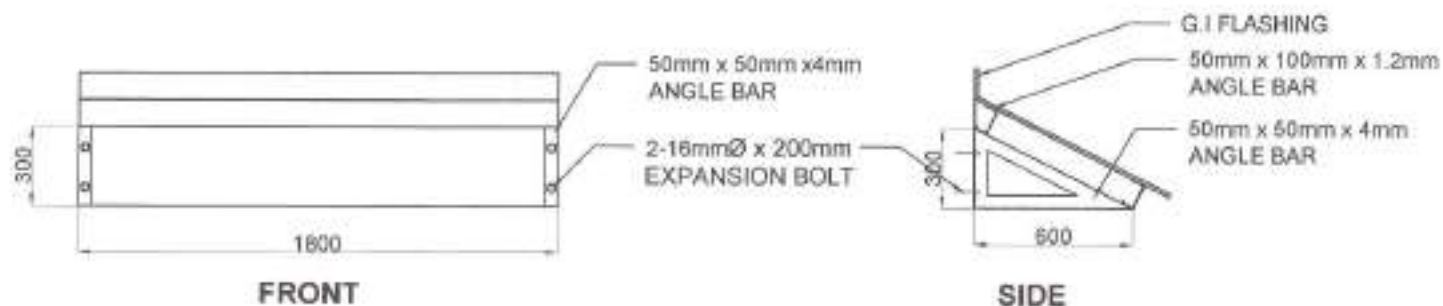
**2 WINDOW CANOPY DETAILS**

SCALE: 1:25mm



Republika ng Pilipinas  
Lungsod ng Quezon  
CITY ENGINEERING DEPARTMENT

|   |                              |   |                                    |   |   |                                   |
|---|------------------------------|---|------------------------------------|---|---|-----------------------------------|
| PROJECT TITLE:<br><b>PROPOSED REHABILITATION OF SAINT CATHERINE DAY CARE CENTER</b> | DRAWN BY:<br>DATE: 8/12/2021 | SUBMITTED BY:<br>   | RECOMMENDING AGENCY:<br>           | APPROVED BY:<br>ENGR. MA. JOSEFINA G. BELMONTÉ<br>CITY ENGINEER - QUEZON CITY | SHEET CONTENT:<br>GENERAL NOTES<br>WINDOW CANOPY<br>DETAILS | SHEET NO.<br><b>ST-1</b><br>05/06 |
| LOCATION:<br>BANGSANG, HOLY SPIRIT DISTRICT 2, QUEZON CITY                          | CHECKED BY:<br>              | DESIGNED BY:<br>ENGR. LEO S. DEL ROSARIO<br>HEAD, PLANNING PROGRAMMING DIVISION | DATE OF APPROVAL:<br>OCT. 12, 2021 |   |   |                                   |

**ROOF PLAN****ROOF FRAMING PLAN****FRONT****SIDE**

1

**GENERAL NOTES**

NOT TO SCALE

**2 WINDOW CANOPY DETAILS**

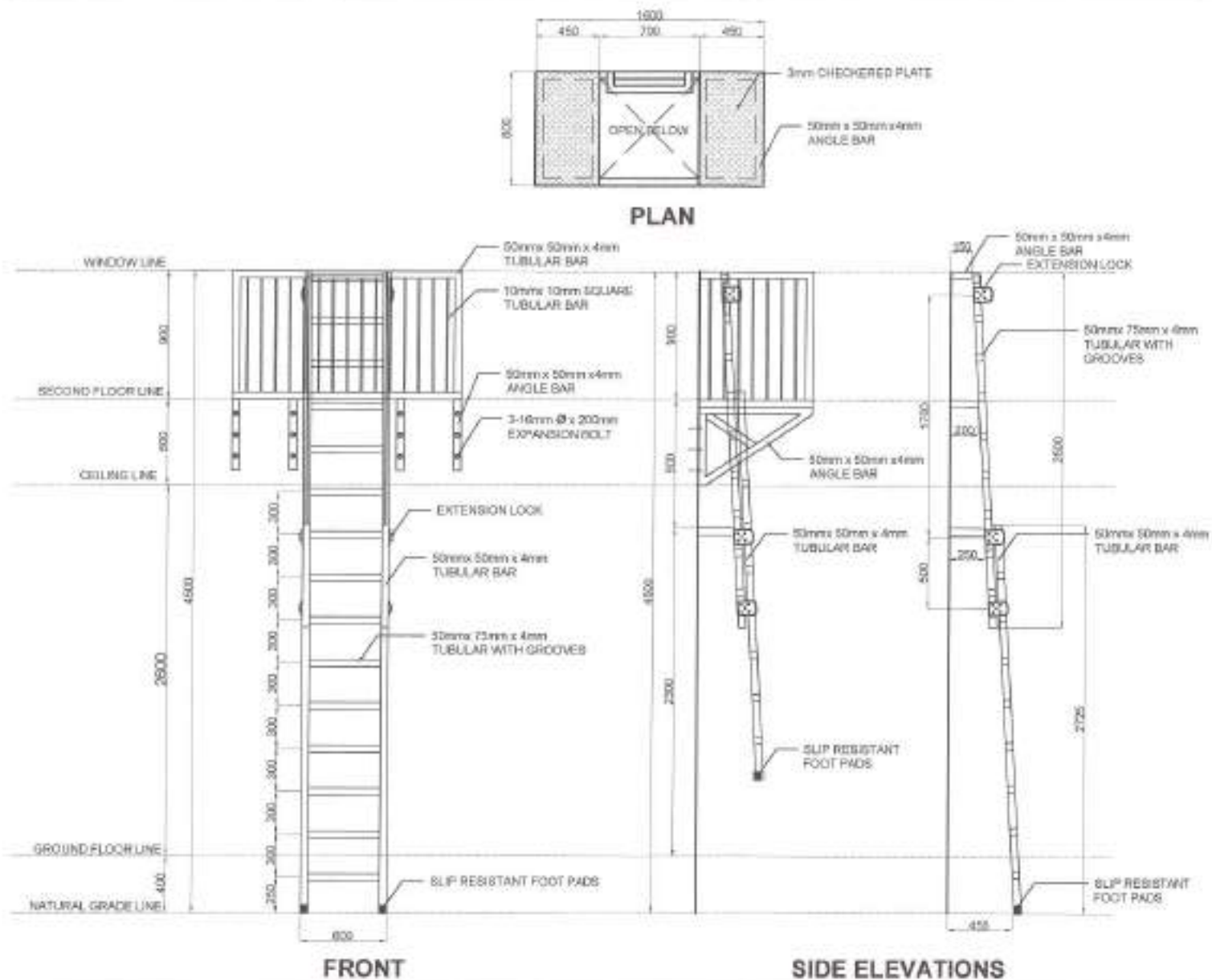
SCALE: 1:25mm



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Lungsod ng Quezon  
CITY ENGINEERING DEPARTMENT

|   |                              |   |                                    |   |   |                                   |
|---|------------------------------|---|------------------------------------|---|---|-----------------------------------|
| PROJECT TITLE:<br><b>PROPOSED REHABILITATION OF SAINT CATHERINE DAY CARE CENTER</b> | DRAWN BY:<br>DATE: 8/12/2021 | SUBMITTED BY:<br>   | RECOMMENDING AGENCY:<br>           | APPROVED BY:<br>ENGR. MA. JOSEFINA G. BELMONTÉ<br>CITY ENGINEER - QUEZON CITY | SHEET CONTENT:<br>GENERAL NOTES<br>WINDOW CANOPY<br>DETAILS | SHEET NO.<br><b>ST-1</b><br>05/06 |
| LOCATION:<br>BANGSANG, HOLY SPIRIT DISTRICT 2, QUEZON CITY                          | CHECKED BY:<br>              | DESIGNED BY:<br>ENGR. LEO S. DEL ROSARIO<br>HEAD, PLANNING PROGRAMMING DIVISION | DATE OF APPROVAL:<br>OCT. 12, 2021 |   |   |                                   |





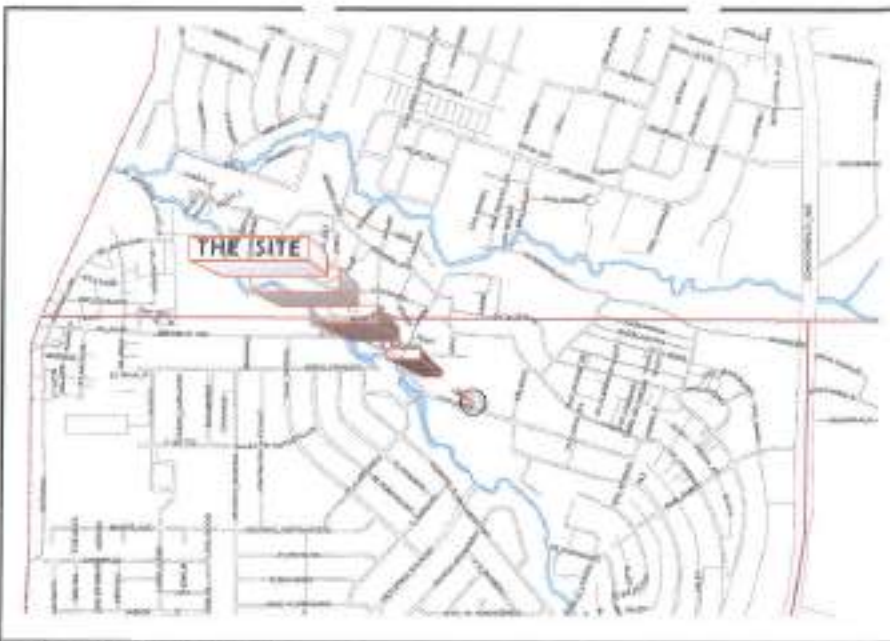
## 1 FIRE EXIT LADDER DETAILS

SCALE: 1:30/1/8

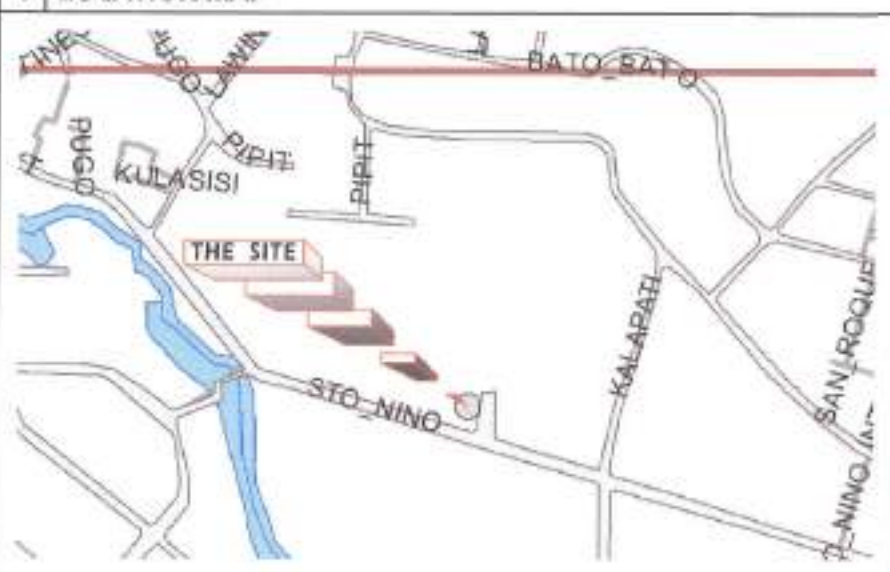


Republika ng Pilipinas  
Lungsod ng Quezon  
CITY ENGINEERING DEPARTMENT

| PROJECT TITLE:   | DATE:     | CHECKED BY: | REVISION NO.: | DESIGNED BY:   | APPROVED BY:  | APPROVED BY:   | SHEET CONTENT            | SHEET NO.     |
|--|-----------|-------------|---------------|--|---|--|--------------------------|---------------|
| PROPOSED REHABILITATION OF SAINT CATHERINE DAY CARE CENTER | 8/12/2021 | JM          |               | ENGR. LEO S. DEL ROSARIO<br>HEAD, PLANNING & PROFESSIONAL DIVISION | ENGR. MARANI R. VERZOSA, JR.<br>CC, STAFF ENGINEER'S DIVISION | HON. MA. JOSEFINA O. BELMONTE<br>CITY MAYOR, QUEZON CITY | FIRE EXIT LADDER DETAILS | ST-2<br>06 06 |

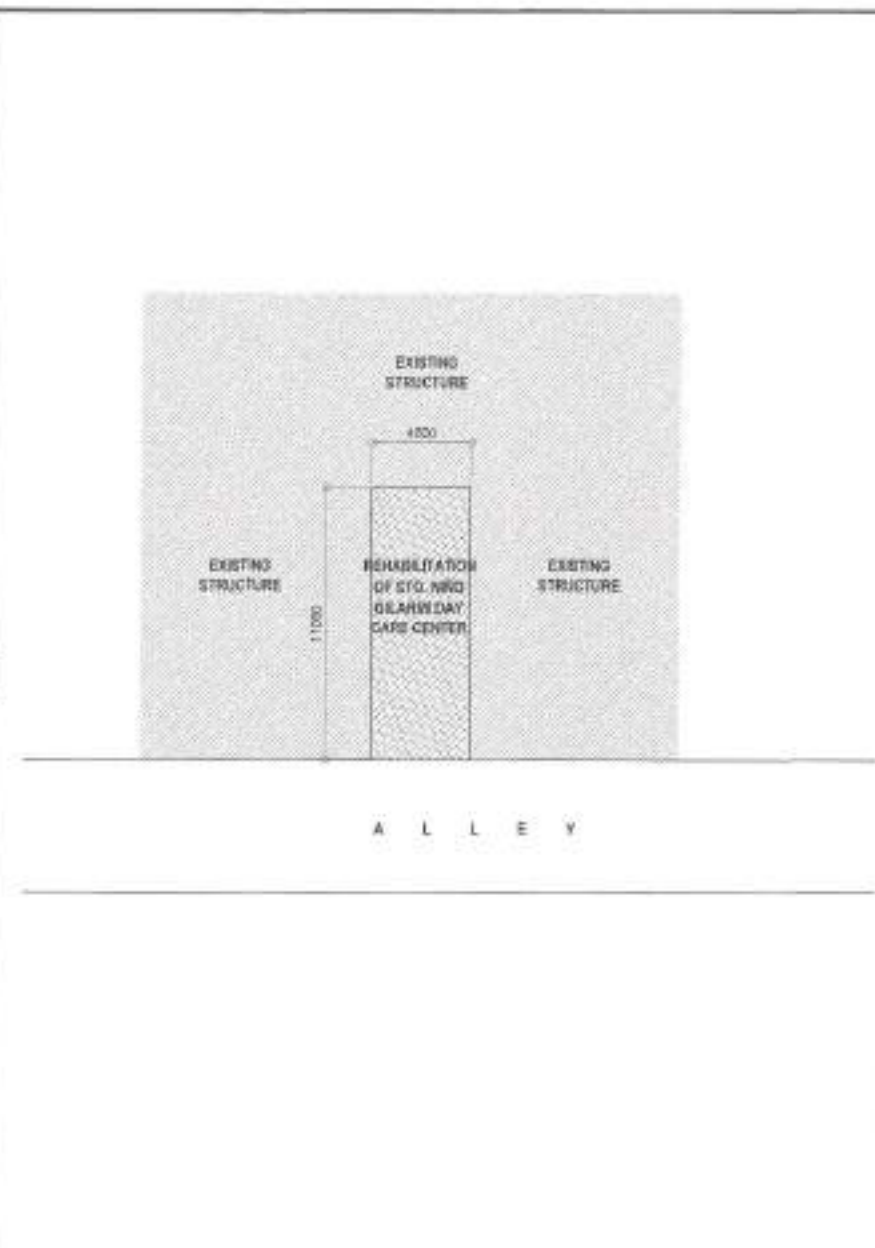


1 | LOCATION MAP



2 | VICINITY MAP

NOT TO SCALE



3 | SITE DEVELOPMENT PLAN

NOT TO SCALE

TABLE OF CONTENTS

| ARCHITECTURAL |                       |
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| AR-01         | LOCATION MAP          |
| AR-01         | VICINITY MAP          |
| AR-01         | SITE DEVELOPMENT PLAN |
| AR-01         | GROUND FLOOR PLAN     |
| AR-01         | FLOOR ELEVATION       |
| AR-01         | SECTION ELEVATION     |
| AR-01         | SCHEDULE OF DOORS     |
| PLUMBING      |                       |
| PL-01         | GENERAL NOTE          |
| PL-01         | PLUMBING PLAN         |
| ELECTRICAL    |                       |
| EL-01         | GENERAL NOTE          |
| EL-01         | ELECTRICAL PLAN       |
| EL-01         | LEGEND                |

Republika ng Pilipinas  
Lungsod ng Quezon  
**CITY ENGINEERING DEPARTMENT**

PROJECT TITLE:  
**PROPOSED REHABILITATION OF STO. NIÑO GILARMI DAY CARE CENTER**

DATE: 04/01/2021  
CHECKED BY: JAB  
REVISION:

LOCATION:  
BARANGAY HOLY SPIRIT, DISTRICT 2, QUEZON CITY

DRAWN BY: JAA  
DATE: 04/01/2021  
CHECKED BY: JAB  
REVISION:

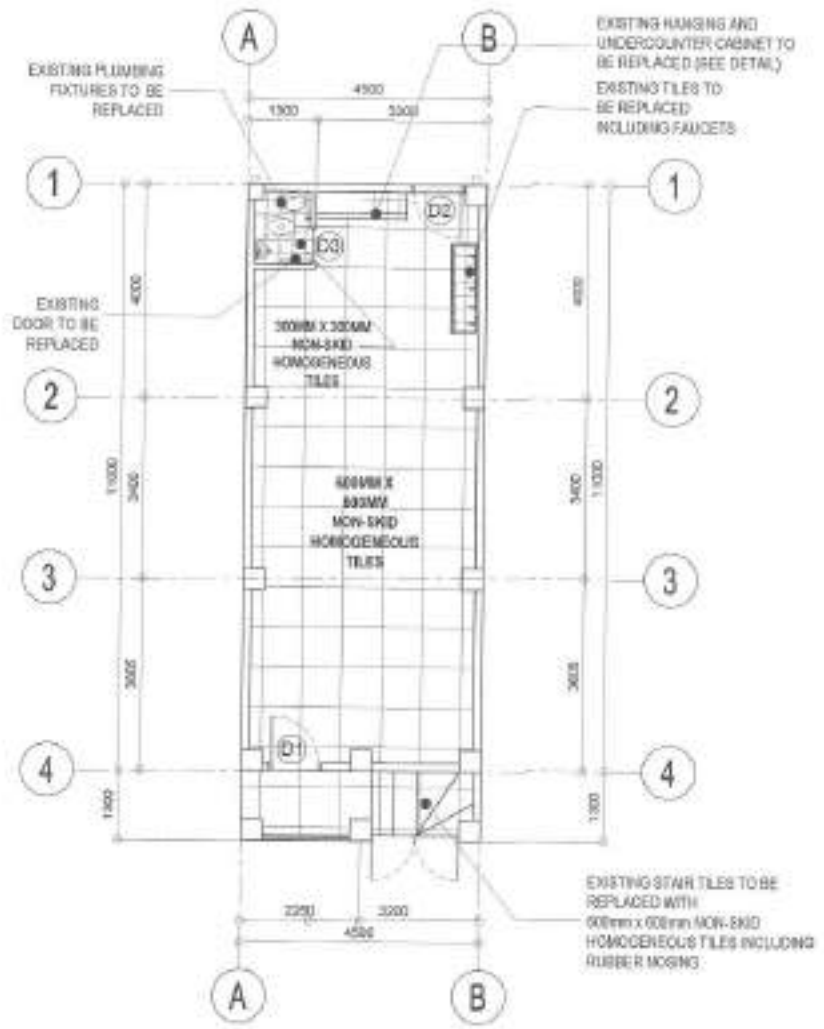
SUBMITTED BY:  
  
**ENGR. LEO S. DEL ROSARIO**  
REG. PLANNING & RECONSTRUCTION ENGINEER

RECOMMENDING APPROVAL:  
  
**ENGR. RAYMOND R. VERZOSA, JR.**  
REG. CIVIL ENGINEERING SUPERVISOR

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

SHEET CONTENT  
LOCATION MAP

SHEET NO.  
**AR-01**  
**15**



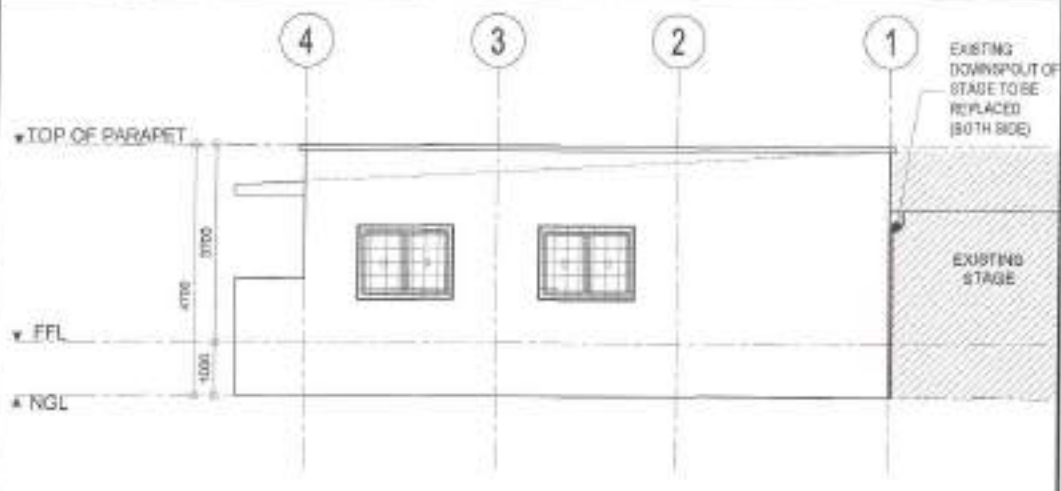
**1 GROUND FLOOR PLAN**

SCALE: 1:100 METERS



**2 FRONT ELEVATION**

SCALE: 1:100 METERS

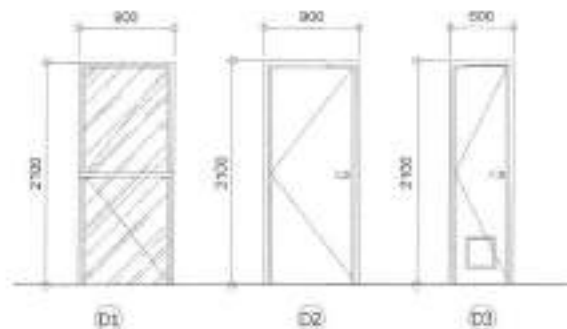
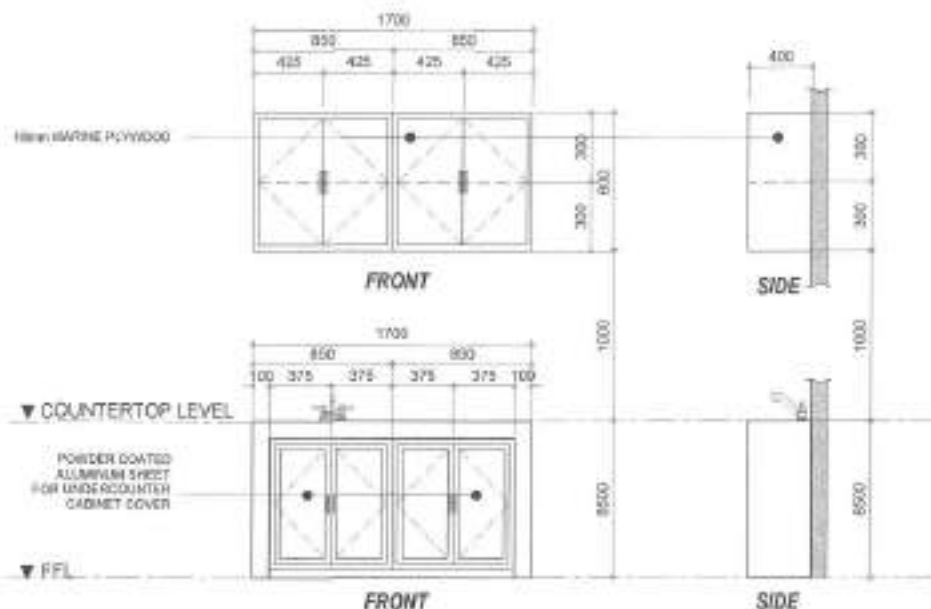


**3 RIGHT SIDE ELEVATION**

SCALE: 1:100 METERS



|   |  |   |   |   |  |   |
|---|--|---|---|---|--|---|
| PROJECT TITLE:<br><b>PROPOSED REHABILITATION OF STO. NINO GILARMI DAY CARE CENTER</b> | DRAWN BY: DAA<br>DATE: April 2011<br>DESIGNED BY: JFM      | SUBMITTED BY:<br><br>ENGR. LEO S. DEL ROSARIO<br>HEAD, PLANNING & RECONSTRUCTION DIVISION | RECOMMENDING APPROVAL:<br><br>ENGR. MAGANI R. VERZOSA, JR.<br>CITY ENGINEERING DEPARTMENT | APPROVED BY:<br>HON. MA. JOSEFINA G. BELMONTE<br>CITY ENGINEER, QUEZON CITY | SHEET CONTENT:<br>GROUND FLOOR PLAN<br>FRONT ELEVATION<br>RIGHT SIDE ELEVATION | SHEET NO.:<br><b>AR-02</b><br><b>25</b> |
|   | LOCATION:<br>BARANGAY HOLY SPIRIT, DISTRICT 2, QUEZON CITY | REVISION NO.:   |   |   |  |   |



| MARK | # OF UNITS | DESCRIPTION                          |
|------|------------|--------------------------------------|
| D1   | 1.00T      | GLASS DOOR WITH COMPLETE ACCESSORIES |
| D2   | 1.00T      | PANEL DOOR WITH COMPLETE ACCESSORIES |
| D3   | 1.00T      | PVC DOOR WITH COMPLETE ACCESSORIES   |

**1 CABINET DETAIL**

SCALE : 1:100 METERS

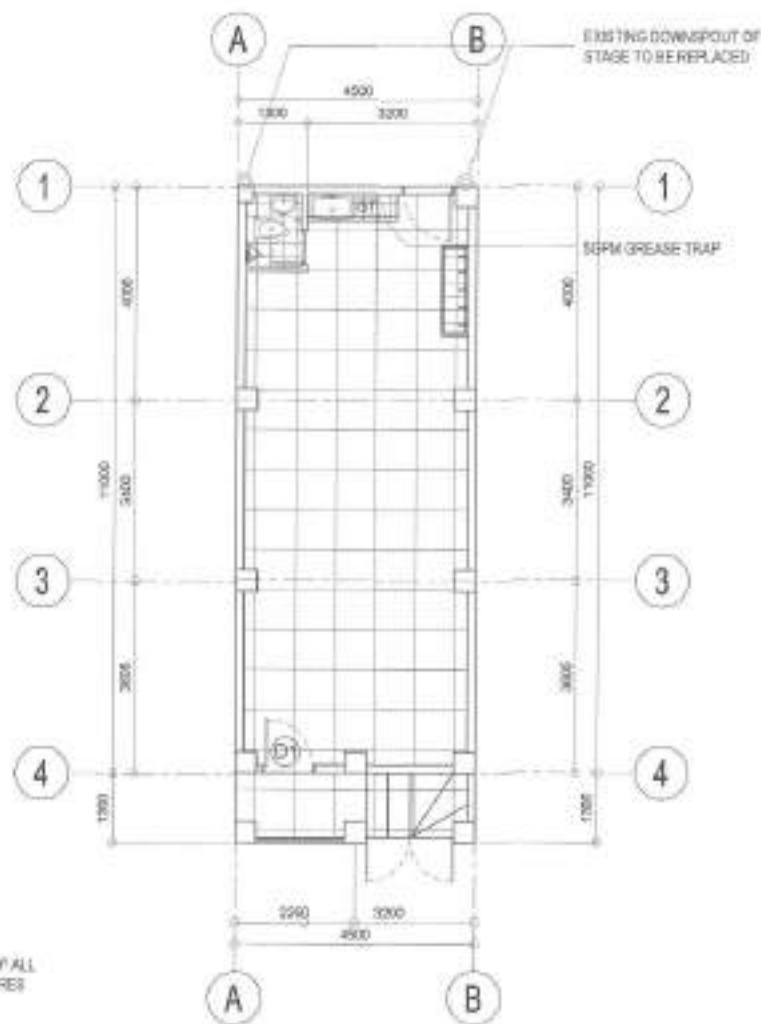
**2 SCHEDULE OF DOORS**

SCALE : 1:100 METERS

|  |  |                     |   |  |  |                               |           |
|--|--|---------------------|---|--|--|-------------------------------|-----------|
| <p>Republika ng Pilipinas<br/>Lungsod ng Quezon<br/><b>CITY ENGINEERING DEPARTMENT</b></p> | PROJECT TITLE:   | DATE: April 6, 2021 | SUBMITTED BY:   | RECOMMENDING APPROVAL:   | APPROVED BY:   | SHEET CONTENT                 | SHEET NO. |
|  | PROPOSED REHABILITATION OF STO. NIÑO GILARMI DAY CARE CENTER | DESIGNED BY: JCS    | <br><b>ENGR. LEO S. DEL ROSARIO</b><br><small>REG. PLANNER &amp; PROJECT SUPERVISOR</small> | <br><b>ENGR. ISAGANI R. VERZOSA, JR.</b><br><small>REG. CIVIL ENGINEER</small> | <br><b>HON. MA. JOSEFINA G. BELMONTE</b><br><small>CITY ENGINEER</small> | SHEET 03 OF SCHEDULE OF DOORS |           |
|  | LOCATION:<br>BARANGAY HOLY SPIRIT, DISTRICT 2, QUEZON CITY   | REVISION:           |   |  |  |                               |           |
|  |  |                     |   |  |  |                               |           |



1. ALL THE PLUMBING/SANITARY WORKS INCLUDED HEREIN SHALL BE EXECUTED ACCORDING TO THE PROVISION OF THE PHILIPPINE PLUMBING CODE, THE NATIONAL BUILDING CODE, RULES AND REGULATION OF QUEZON CITY.
2. COORDINATE THE DRAWINGS WITH OTHER RELATED DRAWINGS AND SPECIFICATION REQUIRED. THE ENGR./ARCH. SHALL BE NOTIFIED IMMEDIATELY OF ANY DISCREPANCY FOUND THEREIN.
3. ALL PIPES SHALL BE INSTALLED AS INDICATED ON PLANS. ANY RELOCATION REQUIRED FOR PROPER EXECUTION OF OTHER TRADES SHALL BE WITH PRIOR APPROVAL OF THE ENGINEER OR ARCHITECT.
4. PROPOSED SANITARY UTILITIES SHALL BE CONFORM TO THE ACTUAL LOCATION, DEPTH AND INVERT ELEVATION OF ALL EXISTING STRUCTURES AND PIPES AS VERIFIED BY THE CONTRACTOR.
5. ALL SLOPES FOR HORIZONTAL DRAINAGE SHALL MAINTAIN 1% MIN. UNLESS OTHERWISE SPECIFIED.
6. SIZES OF WATER SUPPLY PIPES TO FIXTURES SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTION.
7. THE CONTRACTOR SHALL VERIFY ALL EXISTING UTILITIES AT SITE AND COORDINATE THE WORKS WITH THE SEWER LINE EFFLUENT DISPOSAL POINT AND WATER LINE SERVICE CONNECTING POINT.
8. ALL WATER PIPE AND WATER TANKS SHALL BE THOROUGHLY FLUSHED AND DISINFECTED WITH LIQUID CHLORINE OR HYDROCHLORIDE SOLUTION.
9. ALL WATER PIPES SHALL BE HYDROSTATICALLY TESTED TO A PRESSURE 1-1/2 THE DESIGNED WORKING PRESSURE OF THE SYSTEM.
10. ALL SANITARY AND STORM DRAINAGE PIPES SHALL BE HYDROSTATICALLY TESTED AT LEAST 3.0 MTS. HEAD TO ENSURE THAT THE SYSTEM ARE WATER TIGHT.
11. ALL DIMENSIONS ARE IN METERS AND ALL PIPES SIZES ARE IN MILLIMETER UNLESS OTHERWISE SPECIFIED.
12. ALL PIPES INDICATED ON PLANS REFER TO PIPES INSIDE DIAMETER.




NOTE:  
REPLACEMENT OF ALL  
PLUMBING FIXTURES

**1 GENERAL NOTES**

SCALE: NOT TO SCALE

**2 PLUMBING LAYOUT**

SCALE: 1:100 METERS

|   |  |                          |  |  |  |                                  |              |
|---|--|--------------------------|--|--|--|----------------------------------|--------------|
|  <p>Republika ng Pilipinas<br/>Lungsod ng Quezon<br/><b>CITY ENGINEERING DEPARTMENT</b></p> | PROJECT TITLE:   | DATE: <i>Apr 6, 2021</i> | SUBMITTED BY:  | RECOMMENDING APPROVAL:   | APPROVED BY:                                   | SHEET CONTENT:                   | SHEET NO.:   |
|   | PROPOSED REHABILITATION OF STO. NIÑO GILARMI DAY CARE CENTER | DESIGNED BY: <i>JJA</i>  | ENGR. LEO S. DEL ROSARIO<br>SAC, PLUMBING & ROOFING DIVISION | ENGR. ISAGANI R. VERZOSA, JR.<br>SAC, CIVIL ENGINEERING DIVISION | HON. MA. JOSEFINA G. BELMONTE<br>CITY ENGINEER | GENERAL NOTES<br>PLUMBING LAYOUT | PL-01<br>4/5 |
|   | ADDRESS:<br>BARANGAY HOLY SPIRIT, DISTRICT 2, QUEZON CITY    | REVISION NO.:            |  |  |  |                                  |              |

- ALL ELECTRICAL WORK SHALL BE DONE IN ACCORDANCE WITH THE PROVISIONS OF THE LATEST EDITION OF THE PHILIPPINE ELECTRICAL CODE, THE LAWS AND ORDINANCES OF THE LOCAL CODE OFFICERS AND THE REQUIREMENTS OF THE LOCAL POWER AND TELEPHONE UTILITY COMPANY.
- THE CONTRACTOR SHALL SECURE ALL PERMITS AND PAY ALL FEES REQUIRED FOR THE WORK AND SHALL FURNISH THE OWNER THROUGH THE ENGINEER, FINAL CERTIFICATES OF ELECTRICAL INSPECTION AND APPROVAL FROM THE GOVERNMENT AUTHORITY FOR COMPLETION OF WORK.
- ALL EMBEDDED CONDUIT ENDS SHALL BE PVC CONDUITS AND FOR EXPOSED INSTALLATION SHALL BE THE APPROVED BY CONDUIT CLAMPS EVERY 300 MILLIMETER.
- PULL BOXES SHALL BE PROVIDED BY THE CONTRACTOR AND WHERE NECESSARY TO FACILITATE WIRE PULLING EVEN IF THERE ARE NOT INDICATED ON THE PLANS. SIZES OF ALL PULL BOXES SHALL BE COMPUTED BASED ON THE CODE REQUIREMENTS. CLAMPS SHALL BE DRAWINGS TO THE ENGINEER FOR APPROVAL. PRIOR TO FABRICATION, LOCATION OF PULLBOXES SHALL BE APPROVED BY THE ARCHITECT/ENGINEER AND MUST BE REFLECTED ON THE "AS-BUILT" PLAN.
- ALL POWER OUTLETS AND SWITCHES SHALL BE DISCONNECTED WITH MAIN DISCONNECTER FOR 200V.
- PROVIDE GROUND FAULT CURRENT INTERRUPTER (GFCI) BREAKER FOR LUMINAIRES MARKED "GFCI" ON THE PLAN.
- ALL METALLIC CONDUITS, CABINETS AND EQUIPMENT SHALL BE PROPERLY GROUNDED AND GANGED.
- UNLESS OTHERWISE NOTED, MOUNTING HEIGHT FOR WALL MOUNTED DEVICES SHALL BE AS FOLLOWS:

RECEPTACLE OUTLET - 300MM AFF. 115MM ABOVE WORKING SURFACE  
 TELEPHONE OUTLET - 300MM AFF.  
 DATA OUTLET - 300MM AFF.  
 LIGHTING SWITCH - 1400 MM AFF.  
 HANGBOARD - 1800 MM AFF.

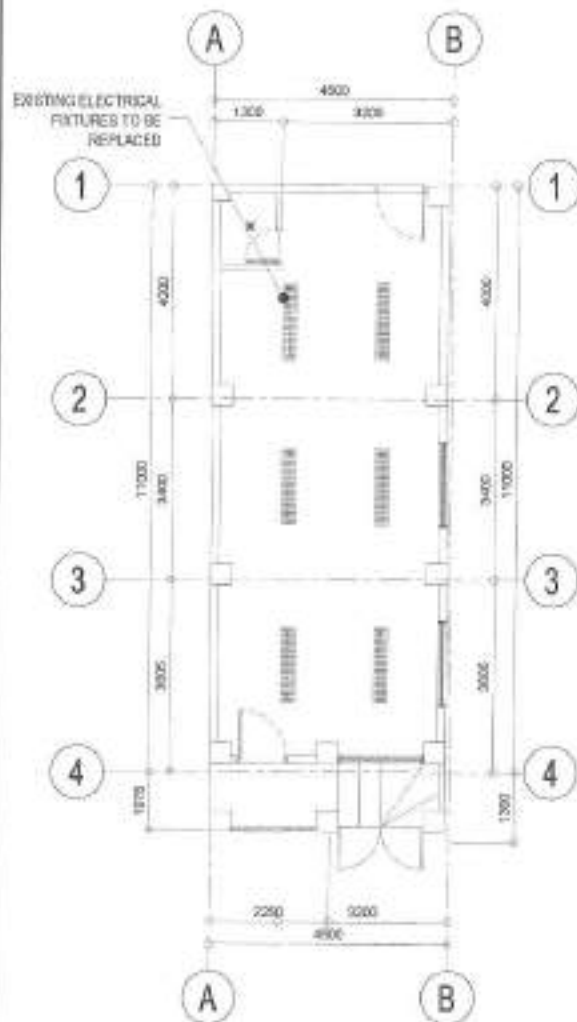
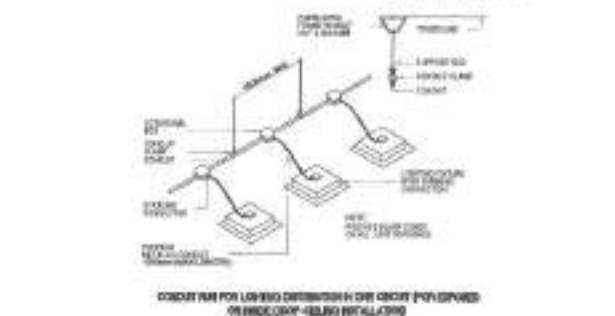
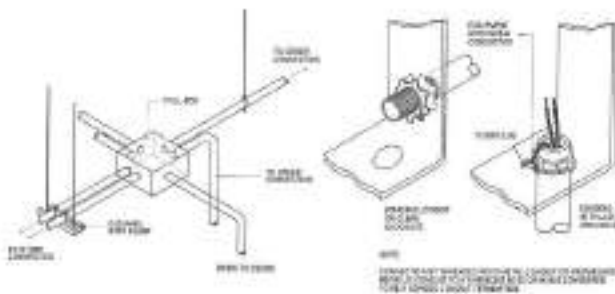
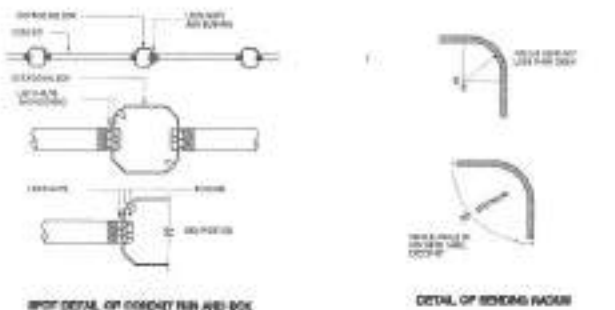
- REFER TO MECHANICAL PLUMBING AND FIRE PROTECTION DRAWINGS FOR MOUNTING AND LOCATION OF EQUIPMENT AS WELL AS 1-400 CODES, SEQUENCES AND SPECIFICATIONS AND OR SHOW UNDER THEIR RESPECTIVE SECTIONS.
- ALL MATERIALS TO BE USED SHALL BE OF THE BEST QUALITY. BRANDS SHALL BE AS SPECIFIED.
- THE DRAWINGS AND SPECIFICATIONS ARE INTENDED TO PRESENT GENERAL LAYOUT AND SHOW OUTLINE DESCRIPTIONS OF THE PROJECT BUT DO NOT NECESSARILY INDICATE DIMENSIONS, ACROSS LOCATIONS, LEVELS AND DISTANCES OF THE EQUIPMENT. THE CONTRACTOR IS HEREBY REQUIRED TO MAKE SUCH ADJUSTMENT AT THE JOBSITE AS LOCATION, DISTANCES AND LEVELS ARE COVERED BY ACTUAL FIELD CONDITIONS.
- ANY DISCREPANCY BETWEEN THE PLANS AND SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR CLARIFICATION DECISION.
- ALL LIGHTING AND COMMERCIAL OUTLET CIRCUITS SHALL BE 1.5% NO. MM. THINNE COPPER WIRE UNLESS OTHERWISE NOTED. MINIMUM SIZE OF WIRE SHALL BE 1.5% NO. MM. COPPER WIRE. ALL WIRES AND CABLES SHALL BE COVER CODED AS FOLLOWS:

LINE 1 - RED  
 LINE 2 - YELLOW  
 NEUTRAL - WHITE  
 GROUND - GREEN

- WIRE WIRE CUTTING DISC SHALL BE FABRICATED FROM STEEL WITH THICKNESS AS FOLLOWS:  
 MAXIMUM WIDTH OF THE WIRE SURFACE SIZES: 5A  
 UP TO INCLUDING 10 AMPERE OR REPAIRED WITH METAL PRIMER EPOXY AND TOP COAT  
 OVER 150 AMPERE NOT OVER 100 MM OR REPAIRED WITH METAL PRIMER EPOXY AND TOP COAT  
 OVER 100 AMPERE NOT OVER 100 MM OR REPAIRED WITH METAL PRIMER EPOXY AND TOP COAT  
 OVER 100 MM OR REPAIRED WITH METAL PRIMER EPOXY AND TOP COAT
- ALL ELECTRICAL WORK HEREIN SHALL BE CONDUCTED BY EXPERIENCED MEN UNDER THE DIRECT SUPERVISION OF A FULL-TIME LICENSED ELECTRICAL ENGINEER AND A FULLY ACCREDITED ELECTRICAL CONTRACTOR. ALL WORK SHALL BE NEATLY PLACED, SECURELY FASTENED AND PROPERLY FINISHED.
- TYPE OF SERVICE ENTRANCE SHALL BE: 3-PHASE, 3-WIRE AND 3-NEUTRAL, 3-PHASE, 200V AC SYSTEM.

- CONDUITS IN WALL SHALL THERE BE MORE THAN THE EQUIVALENT OF FOUR QUARTER ROUNDS ALONG ONE RUN. ALL CONDUIT BENDS SHALL BE MADE BY USING HYDRAULIC BENDERS. MINIMUM BENDING RADIUS MUST BE IN ACCORDANCE TO THE CODE REQUIREMENTS.

- UPON COMPLETION OF ELECTRICAL CONSTRUCTION WORK, INSULATION RESISTANCE TEST AND RESISTANCE TEST SHALL BE PERFORMED BY THE CONTRACTOR AND SHALL BE REPORTED IN WRITING TO BE APPROVED BY THE QUEZON CITY ENGINEERING DEPARTMENT REPRESENTATIVE. THE GROUND RESISTANCE FOR ELECTRICAL SYSTEMS SHALL NOT BE MORE THAN 5 OHMS. COMMUNICATION GROUNDING RESISTANCE SHALL NOT EXCEED 5 OHMS.



1 GENERAL NOTES

2 MISCELLANEOUS DETAIL

3 LIGHTING LAYOUT

|   |  |                 |                                     |                                     |                                     |                                     |            |
|---|--|-----------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|------------|
|  <p>Republika ng Pilipinas<br/>Lungsod ng Quezon<br/>CITY ENGINEERING DEPARTMENT</p> | PROJECT TITLE:   | DATE: April 201 | SUBMITTED BY:                       | RECOMMENDING APPROVAL:              | APPROVED BY:                        | SHEET CONTENT:                      | SHEET NO.: |
|   | PROPOSED REHABILITATION OF STO. NIÑO GILARMI DAY CARE CENTER | DATE: April 201 | ENGR. LEO S. DEL ROSARIO            | ENGR. ISAGANI R. VERZOSA, JR.       | HON. MA. JOSEFINA G. BELMONTE       | REVISIONS: NONE                     | EL-01      |
|   | LOCATION: BARANGAY HOLY SPIRIT, DISTRICT 2, QUEZON CITY      | REVISIONS:      | 100, JUAN DELA CRUZ ST. QUEZON CITY | 100, JUAN DELA CRUZ ST. QUEZON CITY | 100, JUAN DELA CRUZ ST. QUEZON CITY | 100, JUAN DELA CRUZ ST. QUEZON CITY | 5          |

## *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 CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF DAY CARE CENTER AT DISTRICT 2 / AREA VII (CLUSTER 4)

**LOCATION :** BARANGAY HOLY SPIRIT, DISTRICT 2, QUEZON CITY

**PROJECT NO. :** 21 - 00174

**DURATION :** Ninety (90) Calendar Days

***BREAKDOWN OF COST***

| ITEM NO. | ITEM OF WORK (DESCRIPTION)               | MATERIALS COST | LABOR COST | INDIRECT COST | AGGREGATE COST |
|----------|--|----------------|------------|---------------|----------------|
|          | <b>BARANGAY COMPLEX DAY CARE CENTER</b>  |                |            |               |                |
| I        | GENERAL REQUIREMENTS                     |                |            |               |                |
| II       | CONSTRUCTION OF HAND WASHING FACILITY    |                |            |               |                |
| III      | REHABILITATION OF DAY CARE CENTER        |                |            |               |                |
|          | <b>STO. NIÑO GILARMI DAY CARE CENTER</b> |                |            |               |                |
| I        | GENERAL REQUIREMENTS                     |                |            |               |                |
| II       | SITE WORKS                               |                |            |               |                |
| III      | CIVIL / STRUCTURAL WORKS                 |                |            |               |                |
| IV       | ARCHITECTURAL WORKS                      |                |            |               |                |
| V        | SANITARY / PLUMBING WORKS                |                |            |               |                |
| VI       | ELECTRICAL WORKS                         |                |            |               |                |
|          | <b>KALIGTASAN DAY CARE CENTER</b>        |                |            |               |                |
| I        | GENERAL REQUIREMENTS                     |                |            |               |                |
| II       | CONSTRUCTION OF HAND WASHING FACILITY    |                |            |               |                |
| III      | REHABILITATION OF DAY CARE CENTER        |                |            |               |                |
|          | <b>SAINT CATHERINE DAY CARE CENTER</b>   |                |            |               |                |
| I        | GENERAL REQUIREMENTS                     |                |            |               |                |
| II       | SITE WORKS                               |                |            |               |                |
| III      | CIVIL / STRUCTURAL WORKS                 |                |            |               |                |
| IV       | ARCHITECTURAL WORKS                      |                |            |               |                |
| V        | SANITARY / PLUMBING WORKS                |                |            |               |                |
|          | <b>MAPAYAPA DAY CARE CENTER</b>          |                |            |               |                |
| I        | GENERAL REQUIREMENTS                     |                |            |               |                |
| II       | CONSTRUCTION OF HAND WASHING FACILITY    |                |            |               |                |
| III      | REHABILITATION OF DAY CARE CENTER        |                |            |               |                |



**BILL OF QUANTITIES**  
(Building Construction/Rehabilitation Project)

**PROJECT TITLE :** PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF BARANGAY COMPLEX DAY CARE CENTER

**LOCATION :** BARANGAY HOLY SPIRIT, DISTRICT 2, QUEZON CITY

**PROJECT NO. :** 21 - 00174

**SCOPE OF WORK :**

I General Requirements include temporary facilities and utilities, billboard, scaffolding, construction safety and health, and clearing, hauling and disposal of construction materials and debris.

II Construction of Handwashing Facility

A Supply and installation of foot operated single sink handwashing facility.

B Site Works include chipping of floor.

C Civil / Structural Works include restoration of concrete flooring.

D Sanitary / Plumbing Works include sewer line / storm drainage system, waterline and miscellaneous.

III Rehabilitation of Day Care Center

A Site Works include cleaning and clearing for painting preparation, removal of doors, windows, plumbing fixtures, dilapidated tiles, roofing and accessories and chipping of concrete walls for electrical works demolition of countertop, removal of hanging cabinet and shelf, undercounter cabinet and drywall partition.

B Civil / Structural Works include concrete works, masonry works, moisture protection and roofing works.

C Architectural Works include floor finishes, wall finishes, partitions and ceiling finishes, fabricated materials, installation of doors and windows, and painting works.

D Sanitary / Plumbing Works include installation of sewer line system, waterline system, valve, appurtenances, fixtures and accessories.

E Electrical Works include installation of roughing-ins, wirings, devices, fixtures, panelboard and accessories.

IV All necessary testing and commissioning shall be performed in accordance to standards.

| ITEM NO.  | GENERAL REQUIREMENTS  | QTY. | UNIT  | UNIT COST            | TOTAL COST |
|-----------|---|------|-------|----------------------|------------|
| <b>I</b>  | <b>GENERAL REQUIREMENTS</b>   |      |       |                      |            |
|           | Billboard   | 1    | unit  | ₱                    | ₱          |
|           | Clearing, Hauling and Disposal of Construction Materials and Debris | 4    | t.l.  |                      |            |
|           | Construction Safety and Health                                      | 1    | unit  |                      |            |
|           | Scaffolding (Rental)  | 74   | sq.m. |                      |            |
|           | Temporary Electrical and Water Facilities                           | 90   | day   |                      |            |
|           | Temporary Enclosure Around the Construction Area (h=2.4)            | 41   | l.m.  |                      |            |
|           |   |      |       | <b>DIRECT COST I</b> | <b>₱</b>   |
| <b>II</b> | <b>CONSTRUCTION OF HAND WASHING FACILITY</b>                        |      |       |                      |            |
| A         | Hand Washing Facility   |      |       |                      |            |
|           | Single Sink, Portable Hand Washing Facility                         | 2    | unit  | ₱                    | ₱          |
|           |   |      |       | Direct Cost A        | ₱          |
| B         | Site Works  |      |       |                      |            |
|           | Chipping of Floor (Plumbing / Sanitary Works)                       | 2    | sq.m. | ₱                    | ₱          |

| ITEM NO. | GENERAL REQUIREMENTS            | QTY. | UNIT  | UNIT COST        | TOTAL COST |
|----------|---------------------------------|------|-------|------------------|------------|
|          |                                 |      |       | Direct Cost B    |            |
|          |                                 |      |       |                  |            |
| C        | Civil / Structural Works        |      |       |                  |            |
|          | Restoration of Concrete (Floor) | 2    | sq.m. | ₱                | ₱          |
|          |                                 |      |       | Materials Cost C | ₱          |
|          |                                 |      |       | Labor Cost C     |            |
|          |                                 |      |       | Direct Cost C    | ₱          |

| ITEM NO.   | GENERAL REQUIREMENTS                             | QTY. | UNIT  | UNIT COST                | TOTAL COST |
|------------|--|------|-------|--------------------------|------------|
| D          | Sanitary / Plumbing Works                        |      |       |                          |            |
|            | Sewer Line / Storm Drainage System               |      |       |                          |            |
|            | 100mm Ø PVC Pipe                                 | 4    | piece | ₱                        | ₱          |
|            | 100mm Ø x 100mm Ø Wye                            | 5    | piece |                          |            |
|            | 100mm Ø 1/8 Bend                                 | 11   | piece |                          |            |
|            | 100mm Ø Cleanout                                 | 1    | piece |                          |            |
|            | Waterline  |      |       |                          |            |
|            | 20mm Ø PPR Pipe                                  | 4    | piece |                          |            |
|            | 20mm Ø Tee Equal                                 | 6    | piece |                          |            |
|            | 20mm Ø 90 Deg Elbow                              | 13   | piece |                          |            |
|            | 20mm Ø x 12 Ø Female Thread Tee                  | 3    | piece |                          |            |
|            | 20mm Ø Coupling                                  | 4    | piece |                          |            |
|            | Miscellaneous & Consumables                      |      |       |                          |            |
|            | 400cc Solvent Cement                             | 2    | can   |                          |            |
|            | All-Around Sealant                               | 2    | can   |                          |            |
|            | Hacksaw Blade                                    | 2    | piece |                          |            |
|            | Teflon Tape                                      | 3    | roll  |                          |            |
|            | Waste Cloth                                      | 1    | kg    |                          |            |
|            |  |      |       | Materials Cost D         | ₱          |
|            |  |      |       | Labor Cost D             |            |
|            |  |      |       | Direct Cost D            | ₱          |
|            |  |      |       |                          |            |
|            |  |      |       | <b>MATERIALS COST II</b> | ₱          |
|            |  |      |       | <b>LABOR COST II</b>     |            |
|            |  |      |       | <b>DIRECT COST II</b>    | ₱          |
| <b>III</b> | <b>REHABILITATION OF DAY CARE CENTER</b>         |      |       |                          |            |
| A          | SITE WORKS                                       |      |       |                          |            |
|            | Removal / Demolition Works                       |      |       |                          |            |
|            | Removal of Doors                                 | 6    | set   | ₱                        | ₱          |
|            | Removal of Windows                               | 11   | sq.m. |                          |            |
|            | Removal of Water Closet                          | 3    | set   |                          |            |
|            | Removal of Lavatory                              | 1    | set   |                          |            |
|            | Removal of Urinal                                | 1    | set   |                          |            |
|            | Removal of Floor Drain                           | 5    | set   |                          |            |
|            | Removal of Dilapidated Tiles                     | 127  | sq.m. |                          |            |
|            | Removal of Roofing and Accessories               | 224  | sq.m. |                          |            |
|            | Chipping of Concrete Wall (For Electrical Works) | 2    | sq.m. |                          |            |
|            | Demolition of Countertop                         | 3    | sq.m. |                          |            |
|            | Removal of Hanging Cabinet                       | 5    | sq.m. |                          |            |
|            | Removal of Undercounter Cabinet                  | 5    | sq.m. |                          |            |
|            | Removal of Drywall Partition                     | 5    | sq.m. |                          |            |
|            | Removal of Shelf                                 | 4    | sq.m. |                          |            |
|            | Cleaning and Clearing for Painting Preparation   | 481  | sq.m. |                          |            |
|            |  |      |       | Direct Cost A            | ₱          |
| B          | CIVIL / STRUCTURAL WORKS                         |      |       |                          |            |

| ITEM NO. | GENERAL REQUIREMENTS                           | QTY. | UNIT  | UNIT COST        | TOTAL COST |
|----------|--|------|-------|------------------|------------|
|          | Moisture Protection                            |      |       |                  |            |
|          | Waterproofing Works                            |      |       |                  |            |
|          | Cementitious Capillary Type Waterproofing (CR) | 13   | sq.m. | ₱                | ₱          |
|          | Flexible Type Waterproofing (Concrete Gutter)  | 18   | sq.m. |                  |            |
|          | Roofing Works                                  |      |       |                  |            |
|          | Pre-painted Rib Type G.I. Roofing              | 236  | sq.m. |                  |            |
|          | Pre-painted G.I. Flashing                      | 60   | l.m.  |                  |            |
|          | Blind Rivets                                   | 600  | piece |                  |            |
|          | Tek screw                                      | 1600 | piece |                  |            |
|          | Silicon Sealant                                | 32   | tube  |                  |            |
|          |  |      |       | Materials Cost B | ₱          |
|          |  |      |       | Labor Cost B     |            |
|          |  |      |       | Direct Cost B    | ₱          |
| C        | ARCHITECTURAL WORKS                            |      |       |                  |            |
|          | Floor Finishes                                 |      |       |                  |            |
|          | 600mm x 600mm Non-Skid Homogeneous Tiles       | 100  | sq.m. | ₱                | ₱          |
|          | 300mm x 300mm Non-Skid Homogeneous Tiles       | 8    | sq.m. |                  |            |
|          | Floor Topping Preparation for Tile Works       | 108  | sq.m. |                  |            |



| ITEM NO. | GENERAL REQUIREMENTS  | QTY. | UNIT  | UNIT COST      | TOTAL COST |
|----------|---|------|-------|----------------|------------|
|          | Wall Finishes and Partitions  |      |       |                |            |
|          | 300mm x 300mm Homogeneous Tiles   | 21   | sq.m. |                |            |
|          | 2000mm High x 1200mm Wide x 10mm Thk Formica Compact, Post Forming Grade, High Pressure Phenolic Laminate EN438 & ISO 4586 Compliant Toilet Partition including 2-Cubicle Doors and Stainless Steel Accessories | 8    | sq.m. |                |            |
|          | Ceiling Finishes  |      |       |                |            |
|          | 6mm Fiber Cement Board including Metal Framing  | 100  | sq.m. |                |            |
|          | 12mm Thk Moisture Resistant Gypsum Board including Metal Framing  | 7    | sq.m. |                |            |
|          | Fabricated Materials  |      |       |                |            |
|          | Hanging Cabinet   | 5    | sq.m. |                |            |
|          | Undercounter Cabinet  | 2    | sq.m. |                |            |
|          | Hand Washing with Cabinet   | 4    | l.m.  |                |            |
|          | Glass Shelf with Cabinet  | 5    | sq.m. |                |            |
|          |   |      |       | Materials Cost | ₱          |
|          |   |      |       | Labor Cost     |            |
|          |   |      |       | Subtotal       | ₱          |
|          | Installation of Doors   |      |       |                |            |
|          | D1- (1.5m x 2.1m) Panel Door  | 1    | set   | ₱              | ₱          |
|          | D2- (0.6m x 2.1m) PVC Door with Louver  | 2    | set   |                |            |
|          | D3- (0.9m x 2.1m) Panel Door  | 1    | set   |                |            |
|          | Wooden Door Jamb  |      |       |                |            |
|          | D1- (1.5m x 2.1m) Panel Door  | 1    | set   |                |            |
|          | D3- (0.9m x 2.1m) Panel Door  | 1    | set   |                |            |
|          | Door Knob, Lever Type, Stainless  | 5    | piece |                |            |
|          | Door Hinge, Heavy Duty, Stainless   | 15   | piece |                |            |
|          | Installation of Windows   |      |       |                |            |
|          | W1- (1.6m x 1.2m) Sliding Window on Aluminum Powder Coated Framing with Complete Accessories  | 5    | set   |                |            |
|          | W2- (0.6m x 0.6m) Awning Window on Aluminum Powder Coated Framing with Complete Accessories   | 2    | set   |                |            |
|          |   |      |       | Materials Cost | ₱          |
|          |   |      |       | Labor Cost     |            |
|          |   |      |       | Subtotal       | ₱          |
|          | Painting Works  |      |       |                |            |
|          | Elastomeric Paint Finish (Exterior Walls including Second Floor)  | 362  | sq.m. | ₱              | ₱          |
|          | Flat Latex Paint Finish   |      |       |                |            |
|          | Ground Floor Ceiling  | 121  | sq.m. |                |            |
|          | Ground Floor Interior Wall  | 144  | sq.m. |                |            |
|          |   |      |       | Materials Cost | ₱          |
|          |   |      |       | Labor Cost     |            |

| ITEM NO. | GENERAL REQUIREMENTS      | QTY. | UNIT  | UNIT COST        | TOTAL COST |
|----------|---------------------------|------|-------|------------------|------------|
|          |                           |      |       | Subtotal         | ₱          |
|          |                           |      |       | Materials Cost C | ₱          |
|          |                           |      |       | Labor Cost C     |            |
|          |                           |      |       | Direct Cost C    | ₱          |
| D        | SANITARY / PLUMBING WORKS |      |       |                  |            |
|          | Sewer Line System         |      |       |                  |            |
|          | 50mmØ PVC Pipe with Hub   | 3    | piece | ₱                | ₱          |
|          | 100mmØ PVC Pipe with Hub  | 3    | piece |                  |            |
|          | 100mmØ x 100mmØ Wye       | 4    | piece |                  |            |
|          | 50mmØ x 50mmØ Tee         | 6    | piece |                  |            |
|          | 100mmØ x 50mmØ Tee        | 6    | piece |                  |            |
|          | 50mmØ 1/4 Bend            | 6    | piece |                  |            |
|          | 50mmØ 1/8 Bend            | 6    | piece |                  |            |
|          | 100mmØ 1/8 Bend           | 4    | piece |                  |            |
|          | 100mmØ Cleanout           | 1    | piece |                  |            |
|          | 50mmØ P-Trap              | 6    | piece |                  |            |

| ITEM NO. | GENERAL REQUIREMENTS  | QTY. | UNIT  | UNIT COST        | TOTAL COST |
|----------|---|------|-------|------------------|------------|
|          | Waterline System  |      |       |                  |            |
|          | 20mmØ PPR Pipe  | 2    | piece |                  |            |
|          | 20mmØ x 20mmØ Tee Equal   | 7    | piece |                  |            |
|          | 20mmØ 90° Elbow   | 15   | piece |                  |            |
|          | 20mmØ x 12mm Ø Female Threaded Tee                                  | 7    | piece |                  |            |
|          | 20mmØ End Cap   | 7    | piece |                  |            |
|          | 20mmØ Union Patent  | 1    | piece |                  |            |
|          | 20mmØ Coupling  | 4    | piece |                  |            |
|          | 20mmØ Male Adaptor  | 5    | piece |                  |            |
|          | Valve and Appurtenances   |      |       |                  |            |
|          | 20mmØ Gate Valve PPR  | 1    | piece |                  |            |
|          | Fixtures  |      |       |                  |            |
|          | Bidet, Heavy-Duty, Stainless Steel (Water Efficient)                | 3    | unit  |                  |            |
|          | Floor Drain, 100mm x 100mm Stainless Steel                          | 3    | piece |                  |            |
|          | Grease Trap, 5GPM, Heavy Duty, with Accessories                     | 1    | set   |                  |            |
|          | Hose Bibb, Heavy Duty (Water Efficient)                             | 1    | piece |                  |            |
|          | Kitchen Sink Faucet, Lever Type (Water Efficient)                   | 1    | piece |                  |            |
|          | Kitchen Sink, Single, Stainless                                     | 1    | piece |                  |            |
|          | Lavatory Faucet, Lever Type, Stainless Heavy Duty (Water Efficient) | 6    | unit  |                  |            |
|          | Lavatory, Wall Hung (Kiddy)   | 1    | unit  |                  |            |
|          | Urinal, Flush Valve (Kiddy)   | 1    | unit  |                  |            |
|          | Water Closet, Tank Type (Kiddy)                                     | 3    | unit  |                  |            |
|          | Hardware and Accessories  |      |       |                  |            |
|          | Angle Valve, Single-Way Stainless Steel                             | 8    | piece |                  |            |
|          | Angle Valve, Two-Way Stainless Steel                                | 3    | piece |                  |            |
|          | Metal Door Hook   | 2    | piece |                  |            |
|          | Flexible Hose   | 11   | piece |                  |            |
|          | Miscellaneous   |      |       |                  |            |
|          | 400cc Solvent Cement  | 3    | can   |                  |            |
|          | Hacksaw Blade   | 3    | piece |                  |            |
|          | Teflon Tape   | 7    | roll  |                  |            |
|          | Waste Cloth   | 2    | kg    |                  |            |
|          |   |      |       | Materials Cost D | ₱          |
|          |   |      |       | Labor Cost D     |            |
|          |   |      |       | Direct Cost D    | ₱          |
| E        | ELECTRICAL WORKS  |      |       |                  |            |
|          | Lighting and Power System   |      |       |                  |            |
|          | Roughing-ins  |      |       |                  |            |
|          | 20mmØ PVC Pipe  | 80   | piece | ₱                | ₱          |
|          | 40mmØ IMC Pipe  | 1    | piece |                  |            |
|          | Fittings & Accessories  |      |       |                  |            |
|          | 20mmØ PVC Adaptor   | 100  | piece |                  |            |
|          | 20mmØ PVC Locknut & Bushing   | 100  | pair  |                  |            |
|          | 40mmØ IMC Locknut & Bushing   | 6    | piece |                  |            |

| ITEM NO. | GENERAL REQUIREMENTS                         | QTY. | UNIT  | UNIT COST | TOTAL COST |
|----------|--|------|-------|-----------|------------|
|          | 50mm x 100mm Metal Utility Box               | 20   | piece |           |            |
|          | 100mm x 100mm Metal Junction Box with cover  | 20   | piece |           |            |
|          | Wires and Cables                             |      |       |           |            |
|          | 3.5mm <sup>2</sup> THHN Wire                 | 3    | roll  |           |            |
|          | 5.5mm <sup>2</sup> THHN Wire                 | 70   | l.m.  |           |            |
|          | 50mm <sup>2</sup> THHN Wire                  | 30   | l.m.  |           |            |
|          | 3.5mm <sup>2</sup> TW Wire                   | 3    | roll  |           |            |
|          | 14mm <sup>2</sup> TW Wire                    | 10   | l.m.  |           |            |
|          | Lighting fixtures (Energy Efficient)         |      |       |           |            |
|          | 2 x 20W LED, Fluorescent Light, Troffer-Type | 8    | piece |           |            |
|          | 150mmØ Pin light LED                         | 7    | piece |           |            |
|          | Emergency Light                              | 1    | piece |           |            |
|          | Exit Light                                   | 1    | piece |           |            |
|          | Wiring Devices                               |      |       |           |            |
|          | Outlet with Grounding , Two-gang             | 5    | piece |           |            |
|          | Switch w/ Plate & Cover, One-Pole            | 5    | piece |           |            |
|          | Switch w/ Plate & Cover, Two-Pole            | 1    | piece |           |            |
|          | Pipe Hangers & Supports                      |      |       |           |            |
|          | Horizontal Layout of Pipe                    | 30   | l.m.  |           |            |
|          | Vertical Layout of Pipe                      | 2    | l.m.  |           |            |

| ITEM NO. | GENERAL REQUIREMENTS                         | QTY. | UNIT  | UNIT COST                 | TOTAL COST |
|----------|--|------|-------|---------------------------|------------|
|          | Panel board                                  |      |       |                           |            |
|          | MCB  | 1    | Assy  |                           |            |
|          | Miscellaneous & Consumables                  |      |       |                           |            |
|          | 400cc Solvent Cement                         | 2    | can   |                           |            |
|          | Electrical Tape                              | 5    | roll  |                           |            |
|          | GI Tie Wire, Ga. 16 (For Wire/Cable Pulling) | 1    | kg    |                           |            |
|          | Hacksaw Blade                                | 1    | piece |                           |            |
|          | Masking Tape                                 | 1    | roll  |                           |            |
|          | Torch w/ Butane                              | 2    | set   |                           |            |
|          | Pulling Lubricant                            | 1    | can   |                           |            |
|          | Rubber Tape                                  | 1    | roll  |                           |            |
|          |  |      |       | Materials Cost E          | ₱          |
|          |  |      |       | Labor Cost E              |            |
|          |  |      |       | Direct Cost E             | ₱          |
|          |  |      |       |                           |            |
|          |  |      |       | <b>MATERIALS COST III</b> | <b>₱</b>   |
|          |  |      |       | <b>LABOR COST III</b>     |            |
|          |  |      |       | <b>DIRECT COST III</b>    | <b>₱</b>   |
|          |  |      |       |                           |            |

**SUMMARY**

| ITEM NO      | WORK DESCRIPTION AND SCOPE OF WORKS   | TOTAL COST |
|--------------|---|------------|
| I            | GENERAL REQUIREMENTS  | ₱          |
| II           | CONSTRUCTION OF HAND WASHING FACILITY   |            |
| III          | REHABILITATION OF DAY CARE CENTER   |            |
| <b>NOTE:</b> |   |            |
| •            | Strictly enforce health protocols relative to the latest applicable DPWH memorandum |            |
|              | <b>TOTAL DIRECT COST</b>  | ₱          |
|              | Overhead, Contingencies and<br>Miscellaneous and Consumables<br>Expenses (OCM)      |            |
|              | Profit  |            |
|              | VAT   |            |
|              | <b>TOTAL ESTIMATED COST</b>   | <b>₱</b>   |

**BILL OF QUANTITIES**  
(Building Construction/Rehabilitation Project)

**PROJECT TITLE :** PROPOSED REHABILITATION OF STO. NIÑO GILARMI DAY CARE CENTER

**LOCATION :** BARANGAY HOLY SPIRIT, DISTRICT 2, QUEZON CITY

**PROJECT NO. :** 21 - 00174

**SCOPE OF WORK :**

1. General Requirements include temporary enclosure, billboard, scaffolding, construction safety and health, and clearing, hauling and disposal of construction materials and debris.
2. Site Works include cleaning and clearing for painting preparation, removal of doors, removal of dilapidated tiles and plumbing fixtures
3. Civil / Structural Works include moisture protection and masonry works
4. Architectural Works include floor finishes, countertop finishes, fabricated materials, installation of doors and window lock and painting works.
5. Sanitary / Plumbing Works include installation of roughing-ins, equipment, fixtures and accessories.
6. Electrical Works include installation of lighting fixtures.
7. All necessary testing and commissioning shall be performed in accordance to standards.

| ITEM NO.   | GENERAL REQUIREMENTS  | QTY. | UNIT  | UNIT COST             | TOTAL COST |
|------------|---|------|-------|-----------------------|------------|
| <b>I</b>   | <b>GENERAL REQUIREMENTS</b>   |      |       |                       |            |
|            | Billboard   | 1    | unit  | ₱                     | ₱          |
|            | Clearing, Hauling and Disposal of Construction Materials and Debris | 1    | t.l.  |                       |            |
|            | Construction Safety and Health                                      | 1    | unit  |                       |            |
|            | Scaffolding (Rental)  | 24   | sq.m. |                       |            |
|            | Temporary Enclosure Around the Construction Area (h=2.4)            | 16   | l.m.  |                       |            |
|            |   |      |       | <b>Direct Cost I</b>  | ₱          |
| <b>II</b>  | <b>SITE WORKS</b>   |      |       |                       |            |
|            | Site Clearing and Preparation                                       | 52   | sq.m. | ₱                     | ₱          |
|            | Cleaning and Clearing for Painting Preparation                      | 150  | sq.m. |                       |            |
|            | Removal Works   |      |       |                       |            |
|            | Removal of Doors  | 3    | set   |                       |            |
|            | Removal of Dilapidated Tiles  | 67   | sq.m. |                       |            |
|            | Removal of Water Closet   | 1    | set   |                       |            |
|            | Removal of Urinal   | 1    | set   |                       |            |
|            | Removal of Lavatory   | 1    | set   |                       |            |
|            | Removal of Floor Drain  | 4    | set   |                       |            |
|            | Removal of Kitchen Sink   | 1    | set   |                       |            |
|            |   |      |       | <b>Direct Cost II</b> | ₱          |
| <b>III</b> | <b>CIVIL/ STRUCTURAL WORKS</b>                                      |      |       |                       |            |
|            | Moisture Protection   |      |       |                       |            |
|            | Waterproofing Works   |      |       |                       |            |
|            | Cementitious Capillary Type Waterproofing (CR)                      | 4    | sq.m. | ₱                     | ₱          |
|            | Masonry Works   |      |       |                       |            |

| ITEM NO.  | GENERAL REQUIREMENTS                             | QTY. | UNIT  | UNIT COST                 | TOTAL COST  |
|-----------|--|------|-------|---------------------------|-------------|
|           | Concrete Bonding Agent (For Hairline Cracks)     | 4    | sq.m. |                           |             |
|           | Plastering (For Hairline Cracks)                 | 4    | sq.m. |                           |             |
|           |  |      |       | <b>Materials Cost III</b> | ₱           |
|           |  |      |       | <b>Labor Cost III</b>     |             |
|           |  |      |       | <b>Direct Cost III</b>    | ₱           |
| <b>IV</b> | <b>ARCHITECTURAL WORKS</b>                       |      |       |                           |             |
|           | Floor Finishes                                   |      |       |                           |             |
|           | 600mm x 600mm Non Skid Homogeneous Tiles (Floor) | 51   | sq.m. | ₱                         | ₱ 61,200.00 |
|           | 600mm x 600mm Non Skid Homogeneous Tiles (Stair) | 9    | sq.m. |                           | 10,800.00   |
|           | 300mm x 300mm Non Skid Homogeneous Tiles (CR)    | 4    | sq.m. |                           | 4,000.00    |



| ITEM NO. | GENERAL REQUIREMENTS                                | QTY. | UNIT  | UNIT COST                | TOTAL COST |
|----------|---|------|-------|--------------------------|------------|
|          | Floor Topping for Preparation of Tile Works         | 64   | sq.m. |                          | 19,776.00  |
|          | Rubber Nosing                                       | 7    | l.m.  |                          | 2,800.00   |
|          | Countertop Finishes                                 |      |       |                          |            |
|          | 600mm x 600mm Homogeneous Tiles                     | 7    | sq.m. |                          | 8,400.00   |
|          | Fabricated Materials                                |      |       |                          |            |
|          | Hanging Cabinet                                     | 2    | sq.m. |                          |            |
|          | Undercounter Cabinet                                | 2    | l.m.  |                          |            |
|          | Cabinet Handle                                      | 6    | piece |                          |            |
|          |   |      |       | Materials Cost           | ₱          |
|          |   |      |       | Labor Cost               |            |
|          |   |      |       | Subtotal                 | ₱          |
|          | Installation of Doors                               |      |       |                          |            |
|          | D1- (0.9m x 2.1m) Glass Door with Aluminum Frame    | 1    | set   | ₱                        | ₱          |
|          | D2- (0.9m x 2.1m) Panel Door                        | 1    | set   |                          |            |
|          | D3- (0.6m x 2.1m) PVC Door with Louver              | 1    | set   |                          |            |
|          | Wooden Door Jamb                                    |      |       |                          |            |
|          | D2- (0.9m x 2.1m) Panel Door                        | 1    | set   |                          |            |
|          | Hardware and Accessories                            |      |       |                          |            |
|          | Door Knob, Lever Type, Stainless                    | 2    | piece |                          |            |
|          | Door Hinge, Heavy Duty, Stainless                   | 6    | piece |                          |            |
|          | Window Lock   | 1    | piece |                          |            |
|          |   |      |       | Materials Cost           | ₱          |
|          |   |      |       | Labor Cost               |            |
|          |   |      |       | Subtotal                 | ₱          |
|          | Painting Works                                      |      |       |                          |            |
|          | Epoxy Enamel Paint Finish (Steel Surfaces)          | 9    | sq.m. | ₱                        | ₱          |
|          | Elastomeric Paint Finish (Exterior)                 | 130  | sq.m. |                          |            |
|          | Quick Dry Enamel Paint Finish (Cabinet and Shelves) | 20   | sq.m. |                          |            |
|          |   |      |       | Materials Cost           | ₱          |
|          |   |      |       | Labor Cost               |            |
|          |   |      |       | Subtotal                 | ₱          |
|          |   |      |       |                          |            |
|          |   |      |       | <b>Materials Cost IV</b> | ₱          |
|          |   |      |       | <b>Labor Cost IV</b>     |            |
|          |   |      |       | <b>Direct Cost IV</b>    | ₱          |
| <b>V</b> | <b>SANITARY / PLUMBING WORKS</b>                    |      |       |                          |            |
|          | Sewer Line System                                   |      |       |                          |            |
|          | 100mmØ PVC Pipe with Hub                            | 4    | piece | ₱                        | ₱          |
|          | 100mmØ 1/4 Bend                                     | 6    | piece |                          |            |
|          | 100mmØ Wye  | 2    | piece |                          |            |
|          | 100mmØ Cleanout                                     | 2    | piece |                          |            |
|          | 100mmØ Coupling                                     | 6    | piece |                          |            |
|          | 50mmØ P-Trap  | 5    | piece |                          |            |
|          | Fixtures  |      |       |                          |            |

| ITEM NO. | GENERAL REQUIREMENTS  | QTY. | UNIT  | UNIT COST | TOTAL COST |
|----------|---|------|-------|-----------|------------|
|          | Bidet, Heavy-Duty, Stainless Steel (Water Efficient)                | 1    | unit  |           |            |
|          | Floor Drain, 100mm x 100mm Stainless Steel                          | 4    | piece |           |            |
|          | Grease Trap, 5GPM, Heavy Duty, with Accessories                     | 1    | piece |           |            |
|          | Hose Bibb, Heavy Duty (Water Efficient)                             | 6    | piece |           |            |
|          | Kitchen Sink, Single, Stainless                                     | 1    | piece |           |            |
|          | Kitchen Sink Faucet, Lever Type (Water Efficient)                   | 1    | piece |           |            |
|          | Lavatory Faucet, Lever Type, Stainless Heavy Duty (Water Efficient) | 1    | unit  |           |            |
|          | Lavatory, Wall Hung, Kiddy  | 1    | piece |           |            |
|          | Urinal, Flush Valve, Kiddy  | 1    | piece |           |            |
|          | Water Closet, Tank Type, Kiddy                                      | 1    | piece |           |            |
|          | Hardware and Accessories  |      |       |           |            |
|          | Angle Valve, Single-Way Stainless Steel                             | 3    | piece |           |            |
|          | Angle Valve, Two-Way Stainless Steel                                | 1    | piece |           |            |
|          | Flexible Hose   | 4    | piece |           |            |
|          | Metal Door Hook   | 1    | piece |           |            |

| ITEM NO.  | GENERAL REQUIREMENTS                 | QTY. | UNIT  | UNIT COST                | TOTAL COST |
|-----------|--------------------------------------|------|-------|--------------------------|------------|
|           | Miscellaneous                        |      |       |                          |            |
|           | 400cc Solvent Cement                 | 2    | can   |                          |            |
|           | Hacksaw Blade                        | 3    | piece |                          |            |
|           | Teflon Tape                          | 5    | roll  |                          |            |
|           | Waste Cloth                          | 1    | kg    |                          |            |
|           |                                      |      |       | <b>Materials Cost V</b>  | ₱          |
|           |                                      |      |       | <b>Labor Cost V</b>      |            |
|           |                                      |      |       | <b>Direct Cost V</b>     | ₱          |
| <b>VI</b> | <b>ELECTRICAL WORKS</b>              |      |       |                          |            |
|           | Lighting System                      |      |       |                          |            |
|           | Lighting Fixtures (Energy Efficient) |      |       |                          |            |
|           | T5, 28w LED Tube Light               | 6    | piece | ₱                        | ₱          |
|           | 150mmØ Pin Light LED                 | 1    | piece |                          |            |
|           |                                      |      |       | <b>Materials Cost VI</b> | ₱          |
|           |                                      |      |       | <b>Labor Cost VI</b>     |            |
|           |                                      |      |       | <b>Direct Cost VI</b>    | ₱          |

**SUMMARY**

| ITEM NO      | WORK DESCRIPTION AND SCOPE OF WORKS   | TOTAL COST |
|--------------|---|------------|
| I            | GENERAL REQUIREMENTS  | ₱          |
| II           | SITE WORKS  |            |
| III          | CIVIL/ STRUCTURAL WORKS   |            |
| IV           | ARCHITECTURAL WORKS   |            |
| V            | SANITARY / PLUMBING WORKS   |            |
| VI           | ELECTRICAL WORKS  |            |
| <b>NOTE:</b> |   |            |
|              | <ul style="list-style-type: none"> <li>Strictly enforce health protocols relative to the latest applicable DPWH memorandum</li> </ul> |            |
|              | <b>TOTAL DIRECT COST</b>  | ₱          |
|              | Overhead, Contingencies and<br>Miscellaneous and Consumables Expenses<br>(OCM)<br>Profit<br>VAT                                       |            |
|              | <b>TOTAL ESTIMATED COST</b>   | ₱          |

**BILL OF QUANTITIES**  
(Building Construction/Rehabilitation Project)

**PROJECT TITLE :** PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF KALIGTASAN DAY CARE CENTER

**LOCATION :** BARANGAY HOLY SPIRIT, DISTRICT 2, QUEZON CITY

**PROJECT NO. :** 21 - 00174

**SCOPE OF WORK :**

- I General Requirements include billboard, scaffolding, construction safety and health, and clearing, hauling and disposal of construction materials and debris.
- II Construction of Hand Washing Facility
  - A. Supply and installation of foot operated, single sink handwashing facility.
  - B. Site Works include chipping of floor for sanitary/ plumbing works.
  - C. Civil/ Structural Works include restoration of concrete floor.
  - D. Sanitary/ Plumbing Works include installation of roughing-ins, equipment, fixtures and accessories.
- III Rehabilitation of Day Care Center
  - A. Site Works include demolition works, clearing and cleaning for painting preparation and application of termite treatment.
  - B. Civil/ Structural Works include concrete works, metal works and roofing works.
  - C. Architectural Works include installation of countertop finishes, ceiling finishes, doors and windows, fabricated materials, and painting works.
  - D. Sanitary/ Plumbing Works include installation of fixtures and accessories.
  - E. Electrical Works include installation of roughing-ins, devices, fixtures, panelboard and accessories.
  - F. Utility and Ancillary Works include installation of two (2) layer lined canal with steel grating.
- IV All necessary testing and commissioning shall be performed in accordance to standards.

| ITEM NO.  | WORK DESCRIPTION AND SCOPE OF WORKS                                 | QTY. | UNIT  | UNIT COST            | TOTAL COST |
|-----------|---|------|-------|----------------------|------------|
| <b>I</b>  | <b>GENERAL REQUIREMENTS</b>   |      |       |                      |            |
|           | Billboard   | 1    | unit  | ₱                    | ₱          |
|           | Clearing, Hauling and Disposal of Construction Materials and Debris | 12   | t.l.  |                      |            |
|           | Construction Safety and Health                                      | 1    | unit  |                      |            |
|           | Scaffolding (Rental)  | 24   | sq.m. |                      |            |
|           |   |      |       | <b>DIRECT COST I</b> | ₱          |
| <b>II</b> | <b>CONSTRUCTION OF HAND WASHING FACILITY</b>                        |      |       |                      |            |
| A         | Hand Washing Facility   |      |       |                      |            |
|           | Single Sink, Portable Hand Washing Facility                         | 3    | unit  | ₱                    | ₱          |
|           |   |      |       | Direct Cost A        | ₱          |
| B         | Site Works  |      |       |                      |            |
|           | Chipping of Floor (Sanitary/ Plumbing Works)                        | 2    | sq.m. | ₱                    | ₱          |
|           |   |      |       | Direct Cost B        | ₱          |
| C         | Civil Works   |      |       |                      |            |
|           | Restoration of Concrete (Floor)                                     | 2    | sq.m. | ₱                    | ₱          |
|           |   |      |       | Materials Cost C     | ₱          |
|           |   |      |       | Labor Cost C         |            |
|           |   |      |       | Direct Cost C        | ₱          |

| ITEM NO. | WORK DESCRIPTION AND SCOPE OF WORKS | QTY. | UNIT  | UNIT COST | TOTAL COST |
|----------|-------------------------------------|------|-------|-----------|------------|
| D        | Sanitary/ Plumbing Works            |      |       |           |            |
|          | Sewer Line/ Storm Drainage System   |      |       |           |            |
|          | 100mm Ø PVC Pipe With Hub           | 5    | piece | ₱         | ₱          |
|          | 100mm Ø x 100mm Ø Wye               | 5    | piece |           |            |
|          | 100mm Ø 1/8 Bend                    | 11   | piece |           |            |
|          | 100mm Ø Cleanout                    | 1    | piece |           |            |

| ITEM NO.   | WORK DESCRIPTION AND SCOPE OF WORKS            | QTY. | UNIT  | UNIT COST                | TOTAL COST |
|------------|--|------|-------|--------------------------|------------|
|            | Waterline System                               |      |       |                          |            |
|            | 20mm Ø PPR Pipe                                | 4    | piece |                          |            |
|            | 20mm Ø Tee Equal                               | 6    | piece |                          |            |
|            | 20mm Ø 90 Deg Elbow                            | 13   | piece |                          |            |
|            | 20mm Ø x 12 Ø Female Thread Tee                | 3    | piece |                          |            |
|            | 20mm Ø Union Patent                            | 1    | piece |                          |            |
|            | 20mm Ø Coupling                                | 6    | piece |                          |            |
|            | 20mm Ø Male Adaptor                            | 2    | piece |                          |            |
|            | Valve and Appurtenances                        |      |       |                          |            |
|            | 20mmØ Gate Valve PPR                           | 1    | piece |                          |            |
|            | Miscellaneous & Consumables                    |      |       |                          |            |
|            | 400cc Solvent Cement                           | 2    | can   |                          |            |
|            | All-Around Sealant                             | 2    | can   |                          |            |
|            | Hacksaw Blade                                  | 2    | piece |                          |            |
|            | Teflon Tape                                    | 3    | roll  |                          |            |
|            | Waste Cloth                                    | 1    | kg    |                          |            |
|            |  |      |       | Materials Cost           | ₱          |
|            |  |      |       | Labor Cost               |            |
|            |  |      |       | Direct Cost              | ₱          |
|            |  |      |       | <b>MATERIALS COST II</b> | ₱          |
|            |  |      |       | <b>LABOR COST II</b>     |            |
|            |  |      |       | <b>DIRECT COST II</b>    | ₱          |
| <b>III</b> | <b>REHABILITATION OF DAY CARE CENTER</b>       |      |       |                          |            |
| A          | Site Works                                     |      |       |                          |            |
|            | Demolition Works                               |      |       |                          |            |
|            | Removal of Existing Countertop Tiles           | 5    | sq.m. | ₱                        | ₱          |
|            | Removal of Existing Ceiling                    | 57   | sq.m. |                          |            |
|            | Removal of Existing Doors and Jambs            | 3    | unit  |                          |            |
|            | Removal of Existing Windows                    | 6    | sq.m. |                          |            |
|            | Removal of Existing Water Closet               | 1    | unit  |                          |            |
|            | Removal of Existing Hose Bibb                  | 1    | unit  |                          |            |
|            | Removal of Existing Urinal                     | 1    | unit  |                          |            |
|            | Removal of Existing Kitchen Sink               | 1    | unit  |                          |            |
|            | Removal of Existing Roofing and Accessories    | 65   | sq.m. |                          |            |
|            | Clearing and Cleaning for Painting Preparation | 317  | sq.m. |                          |            |
|            |  |      |       | Subtotal                 | ₱          |
|            | Termite Treatment                              | 7    | gal   | ₱                        | ₱          |
|            |  |      |       | Material Cost            | ₱          |
|            |  |      |       | Labor Cost               |            |
|            |  |      |       | Subtotal                 | ₱          |
|            |  |      |       | Material Cost A          | ₱          |
|            |  |      |       | Labor Cost A             |            |

| ITEM NO. | WORK DESCRIPTION AND SCOPE OF WORKS                | QTY. | UNIT  | UNIT COST     | TOTAL COST |
|----------|--|------|-------|---------------|------------|
|          |  |      |       | Direct Cost A | ₱          |
| B        | Civil/ Structural Works                            |      |       |               |            |
|          | Concrete Works                                     |      |       |               |            |
|          | On-Site Mix Concrete, 21MPa, 3/4" Gravel @ 28 days |      |       |               |            |
|          | Zocalo   | 1    | cu.m. | ₱             | ₱          |
|          | Formworks  |      |       |               |            |
|          | Zocalo   | 1    | sq.m. |               |            |
|          | Metal Works  |      |       |               |            |
|          | Cylindrical Hinges, Heavy Duty, Stainless          | 2    | piece |               |            |
|          | Barrel Bolt  | 1    | set   |               |            |
|          | Miscellaneous & Consumables                        |      |       |               |            |
|          | Assorted Metal Drill Bit                           | 1    | piece |               |            |
|          | Cut Off Blade                                      | 1    | piece |               |            |
|          | Grinding Disc for Metal                            | 1    | piece |               |            |
|          | Welding Rod  | 1    | box   |               |            |



| ITEM NO. | WORK DESCRIPTION AND SCOPE OF WORKS                | QTY. | UNIT  | UNIT COST        | TOTAL COST |
|----------|--|------|-------|------------------|------------|
|          | Roofing Works                                      |      |       |                  |            |
|          | Pre-painted G.I. Rib Type Roofing                  | 68   | sq.m. |                  |            |
|          | Pre-painted G.I. End Flashing                      | 28   | l.m.  |                  |            |
|          | Pre-painted G.I. Ridge Roll                        | 10   | l.m.  |                  |            |
|          | 12mm x 300mm Fiber Cement Fascia Board             | 28   | l.m.  |                  |            |
|          | Tekscrew   | 270  | l.m.  |                  |            |
|          | Blind Rivets                                       | 219  | piece |                  |            |
|          | All Purpose Sealant                                | 6    | tube  |                  |            |
|          |  |      |       | Materials Cost B | ₱          |
|          |  |      |       | Labor Cost B     |            |
|          |  |      |       | Direct Cost B    | ₱          |
| C        | Architectural Works                                |      |       |                  |            |
|          | Countertop Finishes                                |      |       |                  |            |
|          | 300mm x 300mm Homogeneous Tiles                    | 6    | sq.m. | ₱                | ₱          |
|          | Ceiling Finishes                                   |      |       |                  |            |
|          | 6mm Thk Fiber Cement Board including Metal Framing | 60   | sq.m. |                  |            |
|          |  |      |       | Materials Cost   | ₱          |
|          |  |      |       | Labor Cost       |            |
|          |  |      |       | Subtotal         | ₱          |
|          | Installation of Doors                              |      |       |                  |            |
|          | D1 - (1.10m x 2.10m) Flush Door                    | 1    | set   | ₱                |            |
|          | D2 - (0.60m x 2.10m) PVC Door with Louver          | 1    | set   |                  |            |
|          | Door Jamb  |      |       |                  |            |
|          | D1 - Flush Door Wooden Jamb                        | 7    | l.m.  |                  |            |
|          | Hardwares and Accessories                          |      |       |                  |            |
|          | Door Hinges, Heavy Duty, Stainless                 | 6    | set   |                  |            |
|          | Door Knob, Lever Type, Stainless                   | 2    | set   |                  |            |
|          | Installation of Windows                            |      |       |                  |            |
|          | W1 - (2.9m x 1.2m) Steel Casement Window           | 1    | set   |                  |            |
|          | W2 - (1.6m x 1.2m) Steel Casement Window           | 1    | set   |                  |            |
|          | W3 - (0.6m x 0.6m) Steel Awning Window             | 1    | set   |                  |            |
|          |  |      |       | Materials Cost   | ₱          |
|          |  |      |       | Labor Cost       |            |
|          |  |      |       | Subtotal         | ₱          |
|          | Painting Works                                     |      |       |                  |            |
|          | Epoxy Enamel Paint Finish (Steel Members)          | 64   | sq.m. | ₱                | ₱          |
|          | Elastomeric Paint Finish (Exterior Walls)          | 109  | sq.m. |                  |            |
|          | Flat Latex Paint Finish                            |      |       |                  |            |
|          | Interior Walls                                     | 87   | sq.m. |                  |            |
|          | Ceiling  | 60   | sq.m. |                  |            |
|          | Fabricated Materials                               |      |       |                  |            |
|          | Hanging Cabinet                                    | 2    | sq.m. |                  |            |
|          | Undercounter Cabinet                               | 3    | l.m.  |                  |            |
|          |  |      |       | Materials Cost   | ₱          |
|          |  |      |       | Labor Cost       |            |

| ITEM NO. | WORK DESCRIPTION AND SCOPE OF WORKS               | QTY. | UNIT  | UNIT COST        | TOTAL COST |
|----------|---|------|-------|------------------|------------|
|          |   |      |       | Subtotal         | ₱          |
|          | Mural Paint Finish                                | 15   | sq.m. | ₱                | ₱          |
|          |   |      |       | Subtotal         | ₱          |
|          |   |      |       | Materials Cost C | ₱          |
|          |   |      |       | Labor Cost C     |            |
|          |   |      |       | Direct Cost C    | ₱          |
| D        | Sanitary/ Plumbing Works                          |      |       |                  |            |
|          | Sewer Line System                                 |      |       |                  |            |
|          | 50mmØ 1/4 Bend                                    | 6    | piece | ₱                | ₱          |
|          | Fixtures  |      |       |                  |            |
|          | Floor Drain, 100mm x 100mm Stainless Steel        | 2    | piece |                  |            |
|          | Grease Trap, 5GPM, Heavy Duty, with Accessories   | 1    | set   |                  |            |
|          | Hose Bibb, Heavy Duty (Water Efficient)           | 1    | piece |                  |            |
|          | Kitchen Sink Faucet, Lever Type (Water Efficient) | 1    | piece |                  |            |

| ITEM NO. | WORK DESCRIPTION AND SCOPE OF WORKS   | QTY. | UNIT  | UNIT COST        | TOTAL COST |
|----------|---|------|-------|------------------|------------|
|          | Kitchen Sink, Single  | 1    | piece |                  |            |
|          | Lavatory Faucet, Lever Type, Stainless Heavy Duty (Water Efficient)                 | 3    | unit  |                  |            |
|          | Urinal, Flush Valve, Kiddy (Water Efficient)  | 1    | unit  |                  |            |
|          | Water Closet, Tank Type, Kiddy (Water Efficient)                                    | 1    | unit  |                  |            |
|          | Miscellaneous   |      |       |                  |            |
|          | All Around Sealant  | 2    | can   |                  |            |
|          | 400cc Solvent Cement  | 2    | can   |                  |            |
|          | Hacksaw Blade   | 2    | piece |                  |            |
|          | Teflon Tape   | 10   | roll  |                  |            |
|          | Waste Cloth   | 2    | kg    |                  |            |
|          |   |      |       | Materials Cost D | ₱          |
|          |   |      |       | Labor Cost D     |            |
|          |   |      |       | Direct Cost D    | ₱          |
| E        | Electrical Works  |      |       |                  |            |
|          | Lighting and Power System   |      |       |                  |            |
|          | Roughing-ins  |      |       |                  |            |
|          | 20mmØ PVC Pipe  | 75   | piece | ₱                | ₱          |
|          | 25mmØ IMC Pipe  | 5    | piece |                  |            |
|          | Fittings & Accessories  |      |       |                  |            |
|          | 20mmØ PVC Adaptor   | 80   | piece |                  |            |
|          | 20mmØ PVC Locknut & Bushing   | 80   | pair  |                  |            |
|          | 25mmØ IMC Locknut & Bushing   | 5    | pair  |                  |            |
|          | 50mm x 100mm Metal Utility Box  | 15   | piece |                  |            |
|          | 100mm x 100mm Metal Junction Box with Cover   | 15   | piece |                  |            |
|          | Wires and Cables  |      |       |                  |            |
|          | 3.5mm² THHN Wire  | 3    | roll  |                  |            |
|          | 14mm² THHN Wire   | 30   | l.m.  |                  |            |
|          | 3.5mm² TW Wire  | 2    | roll  |                  |            |
|          | 8.0mm² TW Wire  | 15   | l.m.  |                  |            |
|          | Lighting fixtures (Energy Efficient)  |      |       |                  |            |
|          | 600mm x 1200mm, 2 x 18w LED, Troffer Type, with complete accessories, recessed type | 6    | set   |                  |            |
|          | 6" Ø Square Recessed Pinlight LED   | 4    | piece |                  |            |
|          | Emergency Light   | 1    | piece |                  |            |
|          | Exit Light  | 1    | piece |                  |            |
|          | Wiring Devices  |      |       |                  |            |
|          | Orbit Fan, Heavy Duty With Selector Switch  | 2    | piece |                  |            |
|          | Outlet with Grounding , Two-Gang  | 5    | piece |                  |            |
|          | Switch with plate and cover, One Pole   | 2    | piece |                  |            |
|          | Switch with plate and cover, Two Pole   | 1    | piece |                  |            |
|          | Panel board   |      |       |                  |            |
|          | MCB   | 1    | assy  |                  |            |
|          | Pipe Hangers & Supports   |      |       |                  |            |
|          | Horizontal Layout of Pipe   | 15   | l.m.  |                  |            |
|          | Vertical Layout of Pipe   | 2    | l.m.  |                  |            |

| ITEM NO. | WORK DESCRIPTION AND SCOPE OF WORKS          | QTY. | UNIT  | UNIT COST        | TOTAL COST |
|----------|--|------|-------|------------------|------------|
|          | Miscellaneous & Consumables                  |      |       |                  |            |
|          | All around Sealant                           | 2    | can   |                  |            |
|          | 400cc Solvent Cement                         | 2    | can   |                  |            |
|          | Electrical Tape                              | 12   | roll  |                  |            |
|          | GI Tie Wire, Ga. 16 (for wire/cable pulling) | 3    | kg    |                  |            |
|          | Hacksaw Blade                                | 5    | piece |                  |            |
|          | Masking Tape                                 | 5    | piece |                  |            |
|          | Torch with Butane                            | 2    | set   |                  |            |
|          | Paint Thinner                                | 1    | lit   |                  |            |
|          | Pulling Lubricant                            | 1    | can   |                  |            |
|          | Rubber Tape                                  | 5    | roll  |                  |            |
|          |  |      |       | Materials Cost E | ₱          |
|          |  |      |       | Labor Cost E     |            |
|          |  |      |       | Direct Cost E    | ₱          |

| ITEM NO. | WORK DESCRIPTION AND SCOPE OF WORKS | QTY. | UNIT | UNIT COST                 | TOTAL COST |
|----------|-------------------------------------|------|------|---------------------------|------------|
| F        | Utility and Ancillary Works         |      |      |                           |            |
|          | Two-Layer Line Canal                | 6    | l.m. | ₱                         | ₱          |
|          |                                     |      |      | Materials Cost F          | ₱          |
|          |                                     |      |      | Labor Cost F              |            |
|          |                                     |      |      | Direct Cost F             | ₱          |
|          |                                     |      |      |                           |            |
|          |                                     |      |      | <b>MATERIALS COST III</b> | ₱          |
|          |                                     |      |      | <b>LABOR COST III</b>     |            |
|          |                                     |      |      | <b>DIRECT COST III</b>    | ₱          |
|          |                                     |      |      |                           |            |

**SUMMARY**

| ITEM NO   | WORK DESCRIPTION AND SCOPE OF WORKS   | TOTAL COST |
|---|---|------------|
| I   | GENERAL REQUIREMENTS  | ₱          |
| II  | CONSTRUCTION OF HAND WASHING FACILITY   |            |
| III   | REHABILITATION OF DAY CARE CENTER   |            |
| <b>NOTE:</b>  |   |            |
| <ul style="list-style-type: none"> <li>Strictly enforce health protocols relative to the latest applicable DPWH memorandum</li> </ul> | <b>TOTAL DIRECT COST</b><br>Overhead, Contingencies and<br>Miscellaneous and Consumables<br>Expenses (OCM)<br>Profit<br>VAT | ₱          |
|   | <b>TOTAL ESTIMATED COST</b>   | ₱          |

**BILL OF QUANTITIES**  
(Building Construction/Rehabilitation Project)

**PROJECT TITLE :** PROPOSED REHABILITATION OF SAINT CATHERINE DAY CARE CENTER

**LOCATION :** BARANGAY HOLY SPIRIT, DISTRICT 2, QUEZON CITY

**PROJECT NO. :** 21 - 00174

**DURATION :** Ninety (90) Calendar Days

**SCOPE OF WORK :**

1. General Requirements include temporary enclosure, billboard, scaffolding, construction safety and health, and clearing, hauling and disposal of construction materials and debris.
2. Site Works include demolition works, clearing and cleaning for painting preparation, and application of termite treatment.
3. Civil / Structural Works include metal works.
4. Architectural Works include installation of doors and windows, fabricated materials and painting works.
5. Sanitary / Plumbing Works include installation of fixtures.
6. All necessary testing and commissioning shall be performed in accordance to standards.

| ITEM NO.   | WORK DESCRIPTION AND SCOPE OF WORKS                                 | QTY. | UNIT  | UNIT COST                | TOTAL COST |
|------------|---|------|-------|--------------------------|------------|
| <b>I</b>   | <b>GENERAL REQUIREMENTS</b>   |      |       |                          |            |
|            | Billboard   | 1    | unit  | ₱                        | ₱          |
|            | Clearing, Hauling and Disposal of Construction Materials and Debris | 1    | t.l.  |                          |            |
|            | Construction Safety and Health                                      | 1    | unit  |                          |            |
|            | Scaffolding (Rental)  | 92   | sq.m. |                          |            |
|            | Temporary Enclosure Around the Construction Area (H=2.4)            | 17   | l.m.  |                          |            |
|            |   |      |       | <b>Direct Cost I</b>     | ₱          |
| <b>II</b>  | <b>SITE WORKS</b>   |      |       |                          |            |
|            | Demolition Works  |      |       |                          |            |
|            | Removal of Doors  | 4    | set   | ₱                        | ₱          |
|            | Removal of Windows  | 23   | sq.m. |                          |            |
|            | Clearing and Cleaning for Painting Preparation                      | 701  | sq.m. |                          |            |
|            |   |      |       | Subtotal                 | ₱          |
|            | Termite Treatment   | 8    | gal   | ₱                        | ₱          |
|            |   |      |       | Material Cost            | ₱          |
|            |   |      |       | Labor Cost               |            |
|            |   |      |       | Subtotal                 | ₱          |
|            |   |      |       | <b>Materials Cost II</b> | ₱          |
|            |   |      |       | <b>Labor Cost II</b>     |            |
|            |   |      |       | <b>Direct Cost II</b>    | ₱          |
| <b>III</b> | <b>CIVIL/ STRUCTURAL WORKS</b>                                      |      |       |                          |            |
|            | Metal Works   |      |       |                          |            |
|            | Gate  |      |       |                          |            |

| ITEM NO. | WORK DESCRIPTION AND SCOPE OF WORKS       | QTY. | UNIT  | UNIT COST | TOTAL COST |
|----------|---|------|-------|-----------|------------|
|          | 10mm Square Bar                           | 46   | kg    | ₱         | ₱          |
|          | 50mm x 50mm x 2mm Tubular Bar             | 36   | kg    |           |            |
|          | 50mm x 50mm x 4mm Tubular Bar             | 14   | kg    |           |            |
|          | Cylindrical Hinges, Heavy Duty, Stainless | 6    | piece |           |            |
|          | Foot Bolt                                 | 2    | set   |           |            |
|          | Barrel Bolt                               | 1    | set   |           |            |



| ITEM NO.  | WORK DESCRIPTION AND SCOPE OF WORKS   | QTY. | UNIT  | UNIT COST                 | TOTAL COST |
|-----------|---|------|-------|---------------------------|------------|
|           | Fire Exit Window Grilles  |      |       |                           |            |
|           | 10mm Square Bar   | 18   | kg    |                           |            |
|           | 25mm Square Bar   | 58   | kg    |                           |            |
|           | Cylindrical Hinges, Heavy Duty, Stainless   | 2    | piece |                           |            |
|           | Barrel Bolt   | 1    | set   |                           |            |
|           | Miscellaneous & Consumables   |      |       |                           |            |
|           | Acetylene Tank Refill   | 2    | tank  |                           |            |
|           | Assorted Metal Drill Bit  | 3    | piece |                           |            |
|           | Cut Off Blade   | 7    | piece |                           |            |
|           | Grinding Disc for Metal   | 4    | piece |                           |            |
|           | Oxygen Tank Refill  | 3    | tank  |                           |            |
|           | Welding Rod   | 2    | box   |                           |            |
|           |   |      |       | <b>Materials Cost III</b> | ₱          |
|           |   |      |       | <b>Labor Cost III</b>     |            |
|           |   |      |       | <b>Direct Cost III</b>    | ₱          |
| <b>IV</b> | <b>ARCHITECTURAL WORKS</b>  |      |       |                           |            |
|           | Installation of Doors   |      |       |                           |            |
|           | D1 - (0.60m x 2.10m) PVC Door with Louver   | 4    | set   | ₱                         | ₱          |
|           | Hardwares and Accessories   |      |       |                           |            |
|           | Door Hinges, Heavy Duty, Stainless  | 12   | set   |                           |            |
|           | Door Knob, Lever Type, Stainless  | 4    | set   |                           |            |
|           | Installation of Windows   |      |       |                           |            |
|           | W1 - (1.6m x 1.2m) Sliding Window on Aluminum Powder Coated Framing with Complete Accessories | 11   | set   |                           |            |
|           | W2 - (0.6m x 0.6m) Awning Window on Aluminum Powder Coated Framing with Complete Accessories  | 4    | set   |                           |            |
|           |   |      |       | <b>Materials Cost</b>     | ₱          |
|           |   |      |       | <b>Labor Cost</b>         |            |
|           |   |      |       | <b>Subtotal</b>           | ₱          |
|           | Painting Works  |      |       |                           |            |
|           | Epoxy Enamel Finish (Steel Members)   | 23   | sq.m. | ₱                         | ₱          |
|           | Elastomeric Paint Finish (Exterior Walls)   | 271  | sq.m. |                           |            |
|           | Flat Latex Paint Finish   |      |       |                           |            |
|           | Interior Walls  | 273  | sq.m. |                           |            |
|           | Ceiling   | 171  | sq.m. |                           |            |
|           | Fabricated Materials  |      |       |                           |            |
|           | Fire Exit Ladder  | 1    | set   |                           |            |
|           | Metal Canopy  | 20   | l.m.  |                           |            |
|           |   |      |       | <b>Materials Cost</b>     | ₱          |
|           |   |      |       | <b>Labor Cost</b>         |            |
|           |   |      |       | <b>Subtotal</b>           |            |
|           |   |      |       | <b>Materials Cost IV</b>  | ₱          |
|           |   |      |       | <b>Labor Cost IV</b>      |            |
|           |   |      |       | <b>Direct Cost IV</b>     | ₱          |

| ITEM NO. | WORK DESCRIPTION AND SCOPE OF WORKS                                 | QTY. | UNIT | UNIT COST               | TOTAL COST |
|----------|---|------|------|-------------------------|------------|
| V        | <b>SANITARY / PLUMBING WORKS</b>                                    |      |      |                         |            |
|          | Fixtures  |      |      |                         |            |
|          | Lavatory Faucet, Lever Type, Stainless Heavy Duty (Water Efficient) | 5    | unit | ₱                       | ₱          |
|          |   |      |      | <b>Materials Cost V</b> | ₱          |
|          |   |      |      | <b>Labor Cost V</b>     |            |
|          |   |      |      | <b>Direct Cost V</b>    | ₱          |
|          |   |      |      |                         |            |

| ITEM NO. | WORK DESCRIPTION AND SCOPE OF WORKS | QTY. | UNIT | UNIT COST | TOTAL COST |
|----------|-------------------------------------|------|------|-----------|------------|
|----------|-------------------------------------|------|------|-----------|------------|

**SUMMARY**

| ITEM NO.  | WORK DESCRIPTION AND SCOPE OF WORKS | TOTAL COST  |
|---|-------------------------------------|---|
| I   | GENERAL REQUIREMENTS                | ₱   |
| II  | SITE WORKS                          |   |
| III   | CIVIL/ STRUCTURAL WORKS             |   |
| IV  | ARCHITECTURAL WORKS                 |   |
| V   | SANITARY / PLUMBING WORKS           |   |
| <b>NOTE:</b>  |                                     | <b>TOTAL DIRECT COST</b> ₱  |
| <ul style="list-style-type: none"> <li>Strictly enforce health protocols relative to the latest applicable DPWH memorandum</li> </ul> |                                     | Overhead, Contingencies and<br>Miscellaneous and Consumables<br>Expenses (OCM)<br>Profit<br>VAT |
|   |                                     | <b>TOTAL ESTIMATED COST</b> ₱   |

**BILL OF QUANTITIES**  
(Building Construction/Rehabilitation Project)

**PROJECT TITLE :** PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF MAPAYAPA DAY CARE CENTER

**LOCATION :** BARANGAY HOLY SPIRIT, DISTRICT 2, QUEZON CITY

**PROJECT NO. :** 21 - 00174

**SCOPE OF WORK :**

- I. General Requirements including temporary enclosure, billboard, scaffolding, construction safety and health, and clearing, hauling and disposal of construction materials and debris.
- II. Construction of Hand Washing Facility
  1. Installation of foot-operated single sink hand washing facility.
  2. Site Works including chipping of floor.
  3. Civil/ Structural Works including restoration of concrete flooring.
  4. Sanitary/ Plumbing Works including installation of roughing-ins, equipment, fixtures and accessories.
- III. Rehabilitation of Day Care Center
  1. Site Works include removal of fence, doors, windows, ceiling, G.I roof truss, tiles, application of termite treatment, cleaning and clearing for painting preparation.
  2. Civil/ Structural Works including masonry works, moisture protection, metal works and roofing works.
  3. Architectural Works including floor finishes, wall finishes, installation of gates, doors, door jambs and windows ceiling works, painting works and fabrication of materials.
  4. Sanitary/ Plumbing Works including installation of roughing-ins, equipment, fixtures and accessories.
  5. Electrical Works including installation of roughing-Ins, wirings, devices, fixtures, panelboard and accessories.
- IV. All necessary testing and commissioning shall be performed in accordance to standards.

| ITEM NO.  | WORK DESCRIPTION AND SCOPE OF WORKS                                 | QTY. | UNIT  | UNIT COST            | TOTAL COST |
|-----------|---|------|-------|----------------------|------------|
| <b>I</b>  | <b>GENERAL REQUIREMENTS</b>   |      |       |                      |            |
|           | Billboard   | 1    | unit  | ₱                    | ₱          |
|           | Clearing, Hauling and Disposal of Construction Materials and Debris | 5    | t.l.  |                      |            |
|           | Construction Safety and Health                                      | 1    | unit  |                      |            |
|           | Scaffolding (Rental)  | 23   | sq.m. |                      |            |
|           | Temporary Enclosure Around the Construction Area (h=2.4)            | 6    | l.m.  |                      |            |
|           |   |      |       | <b>Direct Cost I</b> | ₱          |
| <b>II</b> | <b>CONSTRUCTION OF HAND WASHING FACILITY</b>                        |      |       |                      |            |
| <b>A</b>  | <b>Hand Washing Facility</b>  |      |       |                      |            |
|           | Single Sink Portable Hand Washing Facility                          | 1    | unit  | ₱                    | ₱          |
|           |   |      |       | Direct Cost A        | ₱          |
| <b>B</b>  | <b>Site Works</b>   |      |       |                      |            |
|           | Chipping of Floor (Sanitary/ Plumbing Works)                        | 2    | sq.m. |                      |            |
|           |   |      |       | Direct Cost B        | ₱          |
| <b>C</b>  | <b>Civil Works</b>  |      |       |                      |            |
|           | Restoration of Concrete Flooring                                    | 2    | sq.m. | ₱                    | ₱          |

| ITEM NO. | WORK DESCRIPTION AND SCOPE OF WORKS | QTY. | UNIT  | UNIT COST        | TOTAL COST |
|----------|-------------------------------------|------|-------|------------------|------------|
|          |                                     |      |       | Materials Cost C | ₱          |
|          |                                     |      |       | Labor Cost C     |            |
|          |                                     |      |       | Direct Cost C    | ₱          |
| D        | Sanitary and Plumbing Works         |      |       |                  |            |
|          | Sewer Line / Storm Drainage System  |      |       |                  |            |
|          | 100mm Ø PVC Pipe                    | 3    | piece | ₱                | ₱          |
|          | 100mm Ø x 100mm Ø Wye               | 5    | piece |                  |            |
|          | 100mm Ø 1/8 Bend                    | 11   | piece |                  |            |
|          | 100mm Ø Cleanout                    | 1    | piece |                  |            |
|          | Waterline                           |      |       |                  |            |
|          | 20mm Ø PPR Pipe                     | 3    | piece |                  |            |
|          | 20mm Ø Tee Equal                    | 6    | piece |                  |            |
|          | 20mm Ø 90 Deg Elbow                 | 13   | piece |                  |            |

| ITEM NO.   | WORK DESCRIPTION AND SCOPE OF WORKS              | QTY. | UNIT  | UNIT COST         | TOTAL COST |
|------------|--|------|-------|-------------------|------------|
|            | 20mm Ø x 12 Ø Female Threaded Tee                | 5    | piece |                   |            |
|            | 20mm Ø Coupling                                  | 4    | piece |                   |            |
|            | 20mmØ Union Patent                               | 1    | piece |                   |            |
|            | 20mmØ Male Adaptor                               | 5    | piece |                   |            |
|            | Valve and Appurtenances                          |      |       |                   |            |
|            | 20mmØ Gate Valve PPR                             | 1    | piece |                   |            |
|            | Miscellaneous & Consumables                      |      |       |                   |            |
|            | 400cc Solvent Cement                             | 2    | can   |                   |            |
|            | All-Around Sealant                               | 2    | can   |                   |            |
|            | Hacksaw Blade                                    | 2    | piece |                   |            |
|            | Teflon Tape                                      | 3    | roll  |                   |            |
|            | Waste Cloth                                      | 1    | kg    |                   |            |
|            |  |      |       | Materials Cost D  | ₱          |
|            |  |      |       | Labor Cost D      |            |
|            |  |      |       | Direct Cost D     | ₱          |
|            |  |      |       | Materials Cost II | ₱          |
|            |  |      |       | Labor Cost II     |            |
|            |  |      |       | Direct Cost II    | ₱          |
| <b>III</b> | <b>REHABILITATION OF DAY CARE CENTER</b>         |      |       |                   |            |
| A          | Site Works                                       |      |       |                   |            |
|            | Removal Works                                    |      |       |                   |            |
|            | Removal of Fence                                 | 15   | sq.m  | ₱                 | ₱          |
|            | Removal of Countertop Tiles                      | 4    | sq.m  |                   |            |
|            | Removal of Floor Tiles                           | 61   | sq.m  |                   |            |
|            | Removal of Wall Tiles                            | 12   | sq.m  |                   |            |
|            | Removal of Ceiling                               | 83   | sq.m  |                   |            |
|            | Removal of Roof                                  | 88   | sq.m  |                   |            |
|            | Removal of Doors                                 | 3    | set   |                   |            |
|            | Removal of Windows                               | 10   | sq.m. |                   |            |
|            | Removal of Gate                                  | 3    | sq.m. |                   |            |
|            | Chipping of Floor (Sanitary/ Plumbing and Works) | 2    | sq.m. |                   |            |
|            | Clearing and Cleaning for Painting Preparation   | 304  | sq.m. |                   |            |
|            |  |      |       | Subtotal          | ₱          |
|            | Termite Treatment                                | 7    | gal   | ₱                 | ₱          |
|            |  |      |       | Materials Cost    | ₱          |
|            |  |      |       | Labor Cost        |            |
|            |  |      |       | Subtotal          | ₱          |
|            |  |      |       | Materials Cost A  | ₱          |
|            |  |      |       | Labor Cost A      |            |
|            |  |      |       | Direct Cost A     | ₱          |
| B          | Civil/ Structural Works                          |      |       |                   |            |
|            | Masonry Works                                    |      |       |                   |            |

| ITEM NO. | WORK DESCRIPTION AND SCOPE OF WORKS  | QTY. | UNIT  | UNIT COST | TOTAL COST |
|----------|--|------|-------|-----------|------------|
|          | 150mm CHB Wall Laying, including Mortar, Reinforcement and Two-Face Plastering | 5    | sq.m. | ₱         | ₱          |
|          | Restoration of Concrete (Plumbing and Electrical Works)                        | 2    | sq.m. |           |            |
|          | Moisture Protection  |      |       |           |            |
|          | Waterproofing Works  |      |       |           |            |
|          | Cementitious Capillary Type  | 5    | sq.m. |           |            |
|          | Metal Works  |      |       |           |            |
|          | Roofing Truss  |      |       |           |            |
|          | 50mm x 50mm x 6mm Angle Bar  | 619  | kg    |           |            |
|          | 50mm x 50mm x 4mm Tubular Bar  | 37   | kg    |           |            |
|          | 50mm x 100mm x 1.2mm C-Purlin  | 331  | kg    |           |            |
|          | 10mmØ Sagrod   | 23   | kg    |           |            |
|          | Gate 1   |      |       |           |            |
|          | 50mm x 50mm x 4mm Tubular Bar  | 76   | kg    |           |            |
|          | 12mm Square Bar  | 33   | kg    |           |            |
|          | Cylindrical Hinges (Heavy Duty)  | 3    | piece |           |            |
|          | 16mmØ Barrel Bolt  | 1    | set   |           |            |
|          | Gate 2   |      |       |           |            |
|          | 32mmØ G.I. Pipe , Sch. 40  | 25   | kg    |           |            |
|          | 12mm Square Bar  | 18   | kg    |           |            |
|          | Cylindrical Hinges (Heavy Duty)  | 3    | piece |           |            |
|          | 16mmØ Barrel Bolt  | 1    | set   |           |            |

| ITEM NO. | WORK DESCRIPTION AND SCOPE OF WORKS                | QTY. | UNIT  | UNIT COST        | TOTAL COST |
|----------|--|------|-------|------------------|------------|
|          | Fence  |      |       |                  |            |
|          | 50mm x 50mm x 4mm Tubular Bar                      | 109  | kg    |                  |            |
|          | 12mm Square Bar                                    | 230  | kg    |                  |            |
|          | Miscellaneous & Consumables                        |      |       |                  |            |
|          | Acetylene Tank (Refill)                            | 1    | tank  |                  |            |
|          | Assorted Metal Drill Bit                           | 10   | piece |                  |            |
|          | Cut Off Blade                                      | 3    | piece |                  |            |
|          | Grinding Disc for Metal                            | 5    | piece |                  |            |
|          | Oxygen Tank (Refill)                               | 2    | tank  |                  |            |
|          | Welding Rod  | 2    | box   |                  |            |
|          | Roofing Works                                      |      |       |                  |            |
|          | Pre-painted G.I. Rib Type Roofing                  | 100  | sq.m. |                  |            |
|          | Pre-painted G.I. End Flashing                      | 52   | sq.m. |                  |            |
|          | Pre-painted G.I. Ridgeroll                         | 10   | l.m.  |                  |            |
|          | 6mm Thk One-sided Aluminum Foil Thermal Insulation | 100  | sq.m. |                  |            |
|          | 50mm x 50mm Cyclone Wire                           | 100  | sq.m. |                  |            |
|          | 12mm x 300mm Fiber Cement Fascia Board             | 52   | l.m.  |                  |            |
|          | Tekscrew   | 425  | piece |                  |            |
|          | Blind Rivets                                       | 831  | piece |                  |            |
|          | All Purpose Sealant                                | 2    | tube  |                  |            |
|          |  |      |       | Materials Cost B | ₱          |
|          |  |      |       | Labor Cost B     |            |
|          |  |      |       | Direct Cost B    | ₱          |
| C        | Architectural Works                                |      |       |                  |            |
|          | Floor Finishes                                     |      |       |                  |            |
|          | 400mm x 400mm Non-Skid Homogenous Floor Tiles      | 3    | sq.m. | ₱                | ₱          |
|          | 600mm x 600mm Non-Skid Homogenous Floor Tiles      | 63   | sq.m. |                  |            |
|          | Floor Topping For Preparation of Tiles             | 66   | sq.m. |                  |            |
|          | Wall Finishes                                      |      |       |                  |            |
|          | 400mm x 400mm Homogenous Wall Tiles                | 12   | sq.m. |                  |            |
|          | 600mm x 600mm Homogenous Wall Tiles                | 4    | sq.m. |                  |            |
|          | Comfort Room Partition (Urinal)                    | 1    | set   |                  |            |
|          | Ceiling Finishes                                   |      |       |                  |            |
|          | 6mm Thk Fiber Cement Board Including Metal Framing | 96   | sq.m. |                  |            |
|          |  |      |       | Materials Cost   | ₱          |
|          |  |      |       | Labor Cost       |            |
|          |  |      |       | Subtotal         | ₱          |
|          | Installation of Doors and Windows                  |      |       |                  |            |
|          | D1 - (1.2m x 2.10m) Panel Door                     | 1    | set   | ₱                | ₱          |
|          | D2 - (0.90m x 2.10m) Panel Door                    | 1    | set   |                  |            |
|          | D3 - (0.60m x 2.10m) PVC Door with Louver          | 1    | set   |                  |            |
|          | D4 - (0.60m x 2.10m) Panel Door                    | 1    | set   |                  |            |
|          | Door Jambs   |      |       |                  |            |



| ITEM NO. | WORK DESCRIPTION AND SCOPE OF WORKS                  | QTY. | UNIT  | UNIT COST      | TOTAL COST |
|----------|--|------|-------|----------------|------------|
|          | Wooden Jambs   |      |       |                |            |
|          | D1 - Panel Door Wooden Jamb                          | 1    | set   |                |            |
|          | D2 - Panel Door Wooden Jamb                          | 1    | set   |                |            |
|          | D4 - Panel Door Wooden Jamb                          | 1    | set   |                |            |
|          | Hardwares and Accessories                            |      |       |                |            |
|          | Door Hinges, Heavy Duty, Stainless                   | 9    | set   |                |            |
|          | Door Knob, Lever Type, Stainless                     | 4    | set   |                |            |
|          | Installation of Windows                              |      |       |                |            |
|          | W1 - (1.6m x 1.2m) Steel Casement Window with Screen | 4    | set   |                |            |
|          | W1 - (0.8m x 1.2m) Steel Casement Window with Screen | 2    | set   |                |            |
|          |  |      |       | Materials Cost | ₱          |
|          |  |      |       | Labor Cost     |            |
|          |  |      |       | Subtotal       | ₱          |
|          | Painting Works                                       |      |       |                |            |
|          | Epoxy Enamel Paint Finish (Steel Surfaces)           | 113  | sq.m. | ₱              | ₱          |
|          | Elastomeric Paint Finish (Exterior Walls)            | 88   | sq.m. |                |            |
|          | Flat Latex Paint Finish                              |      |       |                |            |
|          | Interior Walls                                       | 101  | sq.m. |                |            |
|          | Ceiling  | 94   | sq.m. |                |            |

| ITEM NO. | WORK DESCRIPTION AND SCOPE OF WORKS                  | QTY. | UNIT  | UNIT COST        | TOTAL COST |
|----------|--|------|-------|------------------|------------|
|          | Fabricated Materials                                 |      |       |                  |            |
|          | Countertop Cabinet                                   | 2    | l.m.  |                  |            |
|          | Book Shelf   | 2    | sq.m. |                  |            |
|          |  |      |       | Materials Cost   | ₱          |
|          |  |      |       | Labor Cost       |            |
|          |  |      |       | Subtotal         | ₱          |
|          | Painting Works                                       |      |       |                  |            |
|          | Mural Painting                                       | 18   | sq.m. |                  |            |
|          |  |      |       | Subtotal         | ₱          |
|          |  |      |       | Materials Cost C | ₱          |
|          |  |      |       | Labor Cost C     |            |
|          |  |      |       | Direct Cost C    | ₱          |
| D        | Sanitary/ Plumbing Works                             |      |       |                  |            |
|          | Sewer Line System                                    |      |       |                  |            |
|          | 100mmØ PVC Pipe with Hub                             | 6    | piece | ₱                | ₱          |
|          | 50mmØ No-Hub Coupling                                | 2    | piece |                  |            |
|          | 50mmØ Cleanout                                       | 6    | piece |                  |            |
|          | 50mmØ P-Trap   | 7    | piece |                  |            |
|          | Fixtures   |      |       |                  |            |
|          | Bidet, Heavy-Duty, Stainless Steel (Water Efficient) | 1    | unit  |                  |            |
|          | Floor Drain, 100mm x 100mm Stainless Steel           | 4    | piece |                  |            |
|          | Grease Trap, 5GPM, Heavy Duty, with Accessories      | 1    | set   |                  |            |
|          | Kitchen Sink Faucet, Lever Type (Water Efficient)    | 2    | piece |                  |            |
|          | Hose Bibb, Heavy Duty (Water Efficient)              | 6    | piece |                  |            |
|          | Urinal, Flush Valve, Kiddie (Water Efficient)        | 2    | unit  |                  |            |
|          | Water Closet, Tank Type, Kiddie (Water Efficient)    | 1    | unit  |                  |            |
|          | Hardware and Accessories                             |      |       |                  |            |
|          | Angle Valve, Single-Way Stainless Steel              | 4    | piece |                  |            |
|          | Angle Valve, Two-Way Stainless Steel                 | 1    | piece |                  |            |
|          | Flexible Hose  | 5    | piece |                  |            |
|          | Miscellaneous  |      |       |                  |            |
|          | 400cc Solvent Cement                                 | 2    | can   |                  |            |
|          | Hacksaw Blade  | 3    | piece |                  |            |
|          | Teflon Tape  | 7    | roll  |                  |            |
|          | Waste Cloth  | 2    | kg    |                  |            |
|          |  |      |       | Materials Cost D | ₱          |
|          |  |      |       | Labor Cost D     |            |
|          |  |      |       | Direct Cost D    | ₱          |
| E        | Electrical Works                                     |      |       |                  |            |
|          | Lighting and Power System                            |      |       |                  |            |
|          | Roughing-ins   |      |       |                  |            |
|          | 20mmØ PVC Pipe                                       | 75   | piece | ₱                | ₱          |

| ITEM NO. | WORK DESCRIPTION AND SCOPE OF WORKS         | QTY. | UNIT  | UNIT COST | TOTAL COST |
|----------|---|------|-------|-----------|------------|
|          | 25mmØ IMC Pipe                              | 8    | piece |           |            |
|          | Fittings & Accessories                      |      |       |           |            |
|          | 20mmØ PVC Adaptor                           | 80   | piece |           |            |
|          | 20mmØ PVC Locknut & Bushing                 | 80   | pair  |           |            |
|          | 25mmØ IMC Coupling                          | 8    | piece |           |            |
|          | 25mmØ IMC Locknut & Bushing                 | 4    | piece |           |            |
|          | 50mm x 100mm Metal Utility Box              | 15   | piece |           |            |
|          | 100mm x 100mm Metal Junction Box with Cover | 15   | piece |           |            |
|          | Wires and Cables                            |      |       |           |            |
|          | 3.5mm² THHN Wire                            | 3    | roll  |           |            |
|          | 14mm² THHN Wire                             | 30   | l.m.  |           |            |
|          | 3.5mm² TW Wire                              | 2    | roll  |           |            |
|          | 8.0mm² TW Wire                              | 20   | l.m.  |           |            |
|          | Lighting Fixtures (Energy Efficient)        |      |       |           |            |
|          | 2 x 20W LED Tube Light Troffer Type         | 6    | piece |           |            |
|          | 150mmØ LED Pin light                        | 4    | piece |           |            |
|          | Emergency Light                             | 1    | piece |           |            |
|          | Exit Light                                  | 1    | piece |           |            |
|          | Wiring Devices                              |      |       |           |            |
|          | Orbit Fan, Heavy Duty With Selector Switch  | 2    | piece |           |            |
|          | Outlet with Grounding , Two-gang            | 5    | piece |           |            |
|          | Switch with Plate and Cover, One pole       | 2    | piece |           |            |
|          | Switch with plate and cover, Two pole       | 1    | piece |           |            |

| ITEM NO. | WORK DESCRIPTION AND SCOPE OF WORKS          | QTY. | UNIT  | UNIT COST          | TOTAL COST |
|----------|--|------|-------|--------------------|------------|
|          | Panel board                                  |      |       |                    |            |
|          | PPA  | 1    | assy  |                    |            |
|          | Pipe Hangers & Supports                      |      |       |                    |            |
|          | Horizontal Layout of Pipe                    | 30   | l.m.  |                    |            |
|          | Vertical Layout of Pipe                      | 2    | l.m.  |                    |            |
|          | Miscellaneous & Consumables                  |      |       |                    |            |
|          | 400cc Solvent Cement                         | 2    | can   |                    |            |
|          | All Around Sealant                           | 2    | can   |                    |            |
|          | Electrical Tape                              | 12   | roll  |                    |            |
|          | GI Tie Wire, Ga. 16 (for wire/cable pulling) | 3    | kg    |                    |            |
|          | Hacksaw Blade                                | 5    | piece |                    |            |
|          | Masking Tape                                 | 5    | roll  |                    |            |
|          | Torch w/ Butane                              | 2    | set   |                    |            |
|          | Pulling Lubricant                            | 1    | can   |                    |            |
|          | Rubber Tape                                  | 5    | roll  |                    |            |
|          |  |      |       | Material Cost E    | ₱          |
|          |  |      |       | Labor Cost E       |            |
|          |  |      |       | Direct Cost E      | ₱          |
|          |  |      |       |                    |            |
|          |  |      |       | Materials Cost III | ₱          |
|          |  |      |       | Labor Cost III     |            |
|          |  |      |       | Direct Cost III    | ₱          |
|          |  |      |       |                    |            |

**SUMMARY**

| ITEM NO      | WORK DESCRIPTION AND SCOPE OF WORKS   | TOTAL COST |
|--------------|---|------------|
| I            | GENERAL REQUIREMENTS  | ₱          |
| II           | CONSTRUCTION OF HAND WASHING FACILITY   |            |
| III          | REHABILITATION OF DAY CARE CENTER   |            |
| <b>NOTE:</b> |   |            |
| •            | Strictly enforce health protocols relative to the latest applicable DPWH memorandum |            |
|              | <b>TOTAL DIRECT COST</b>  | ₱          |
|              | Overhead, Contingencies and<br>Miscellaneous and Consumables<br>Expenses (OCM)      |            |
|              | Profit  |            |
|              | VAT   |            |
|              | <b>TOTAL ESTIMATED COST</b>   | ₱          |

**BILL OF QUANTITIES**  
(Building Construction/Rehabilitation Project)

**PROJECT TITLE :** PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF ZEBRA DAY CARE CENTER

**LOCATION :** BARANGAY HOLY SPIRIT, DISTRICT 2, QUEZON CITY

**PROJECT NO. :** 21 - 00174

**SCOPE OF WORK :**

- I. General Requirements including temporary facilities and utilities, billboard, scaffolding, construction safety and health, and clearing, hauling and disposal of construction materials and debris.
- II. Construction of Hand Washing Facility
  1. Installation of foot-operated single sink hand washing facility.
  2. Site Works including chipping of floor
  3. Civil Works including restoration of concrete flooring
  4. Plumbing Works including installation of roughing-ins, equipment, fixtures and accessories.
- III. Rehabilitation of Day Care Center
  1. Site Works include removal of gate, ceiling, G.I roof, tiles and countertop.
  2. Civil/ Structural Works including moisture protection, metal works and roofing works.
  3. Architectural Works including floor finishes, wall finishes, installation of doors and windows, ceiling works, painting works and fabrication of materials and letterings.
  4. Plumbing Works including installation of roughing-ins, equipment, fixtures and accessories.
  5. Electrical Works including installation of roughing-Ins, wirings, devices, fixtures, panelboard and accessories.
- IV All necessary testing and commissioning shall be performed in accordance to standards.

| ITEM NO.  | WORK DESCRIPTION AND SCOPE OF WORKS            | QTY. | UNIT  | UNIT COST            | TOTAL COST |
|-----------|--|------|-------|----------------------|------------|
| <b>I</b>  | <b>GENERAL REQUIREMENTS</b>                    |      |       |                      |            |
|           | Billboard                                      | 1    | unit  | ₱                    | ₱          |
|           | Clearing, Hauling and Disposal of Construction | 2    | t.l.  |                      |            |
|           | Construction Safety and Health                 | 1    | unit  |                      |            |
|           | Scaffolding (Rental)                           | 47   | sq.m. |                      |            |
|           | Temporary Electrical and Water Facilities      | 60   | day   |                      |            |
|           |  |      |       | <b>Direct Cost I</b> | ₱          |
| <b>II</b> | <b>CONSTRUCTION OF HAND WASHING FACILITY</b>   |      |       |                      |            |
| <b>A</b>  | <b>Hand Washing Facility</b>                   |      |       |                      |            |
|           | Double Sink Portable Hand Washing Facility     | 1    | unit  | ₱                    | ₱          |
|           |  |      |       | Direct Cost A        | ₱          |
| <b>B</b>  | <b>Site Works</b>                              |      |       |                      |            |
|           | Chipping of Floor (Plumbing / Sanitary Works)  | 3    | sq.m. | ₱                    | ₱          |
|           |  |      |       | Direct Cost B        | ₱          |
| <b>C</b>  | <b>Civil/ Structural Works</b>                 |      |       |                      |            |
|           | Restoration of Concrete Floor                  | 3    | sq.m. | ₱                    | ₱          |
|           |  |      |       | Materials Cost C     | ₱          |
|           |  |      |       | Labor Cost C         |            |

| ITEM NO.   | WORK DESCRIPTION AND SCOPE OF WORKS         | QTY. | UNIT  | UNIT COST                | TOTAL COST |
|------------|---|------|-------|--------------------------|------------|
|            |   |      |       | Direct Cost C            | ₱          |
| D          | Sanitary and Plumbing Works                 |      |       |                          |            |
|            | Sewer Line / Storm Drainage System          |      |       |                          |            |
|            | 100mm Ø PVC Pipe                            | 3    | piece | ₱                        | ₱          |
|            | 100mm Ø x 100mm Ø Wye                       | 5    | piece |                          |            |
|            | 100mm Ø 1/8 Bend                            | 11   | piece |                          |            |
|            | 100mm Ø Cleanout                            | 1    | piece |                          |            |
|            | Waterline                                   |      |       |                          |            |
|            | 20mm Ø PPR Pipe                             | 3    | piece |                          |            |
|            | 20mm Ø Tee Equal                            | 6    | piece |                          |            |
|            | 20mm Ø 90 Deg Elbow                         | 13   | piece |                          |            |
|            | 20mm Ø x 12 Ø Female Thread Tee             | 5    | piece |                          |            |
|            | 20mm Ø Coupling                             | 4    | piece |                          |            |
|            | Miscellaneous & Consumables                 |      |       |                          |            |
|            | 400cc Solvent Cement                        | 2    | can   |                          |            |
|            | All-Around Sealant                          | 2    | can   |                          |            |
|            | Hacksaw Blade                               | 2    | piece |                          |            |
|            | Teflon Tape                                 | 3    | roll  |                          |            |
|            | Waste Cloth                                 | 1    | kg    |                          |            |
|            |   |      |       | Materials Cost D         | ₱          |
|            |   |      |       | Labor Cost D             |            |
|            |   |      |       | Direct Cost D            | ₱          |
|            |   |      |       |                          |            |
|            |   |      |       | <b>Materials Cost II</b> | ₱          |
|            |   |      |       | <b>Labor Cost II</b>     |            |
|            |   |      |       | <b>Direct Cost II</b>    | ₱          |
| <b>III</b> | <b>REHABILITATION OF DAY CARE CENTER</b>    |      |       |                          |            |
| A          | Site Works                                  |      |       |                          |            |
|            | Removal of Roofing                          | 39   | sq.m. | ₱                        | ₱          |
|            | Removal of Ceiling                          | 2    | sq.m. |                          |            |
|            | Removal of Tiles                            | 76   | sq.m. |                          |            |
|            | Removal of Countertop                       | 2    | sq.m. |                          |            |
|            | Removal of Gate                             | 5    | sq.m. |                          |            |
|            | Clearing and Cleaning for Paint Preparation | 218  | sq.m. |                          |            |
|            |   |      |       | Subtotal                 | ₱          |
|            |   |      |       |                          |            |
|            | Termite Treatment                           | 5    | gal   | ₱                        | ₱          |
|            |   |      |       | Materials Cost           | ₱          |
|            |   |      |       | Labor Cost               |            |
|            |   |      |       | Subtotal                 | ₱          |
|            |   |      |       |                          |            |
|            |   |      |       | Materials Cost A         | ₱          |
|            |   |      |       | Labor Cost A             |            |
|            |   |      |       | Direct Cost A            | ₱          |
| B          | Civil/ Structural Works                     |      |       |                          |            |
|            | Thermal and Moisture Protection             |      |       |                          |            |

| ITEM NO. | WORK DESCRIPTION AND SCOPE OF WORKS                | QTY. | UNIT  | UNIT COST        | TOTAL COST |
|----------|--|------|-------|------------------|------------|
|          | Waterproofing Works                                |      |       |                  |            |
|          | Cementitious Capillary Type                        | 5    | sq.m. | ₱                | ₱          |
|          | Metal Works  |      |       |                  |            |
|          | Gate 1   |      |       |                  |            |
|          | 50mm x 50mm x 4mm Tubular Bar                      | 74   | kg    |                  |            |
|          | 25mm x 50mm x 4mm Tubular Bar                      | 142  | kg    |                  |            |
|          | 50mm x 50mm x 6mm Angle Bar                        | 25   | kg    |                  |            |
|          | 50mm x 6mm Flat Bar                                | 5    | kg    |                  |            |
|          | Barrel Bolt  | 1    | set   |                  |            |
|          | Foot Bolt (Steel Gate)                             | 1    | set   |                  |            |
|          | Cylindrical Hinges (Heavy Duty)                    | 4    | set   |                  |            |
|          | G.I. Plain Sheet                                   | 38   | kg    |                  |            |
|          | Miscellaneous & Consumables                        |      |       |                  |            |
|          | Assorted Metal Drill Bit                           | 3    | piece |                  |            |
|          | Grinding Disc for Metal                            | 5    | piece |                  |            |
|          | Welding Rod  | 1    | box   |                  |            |
|          | Roofing Works                                      |      |       |                  |            |
|          | Pre-painted G.I. Rib Type Roofing                  | 39   | sq.m. |                  |            |
|          | Pre-painted G.I. End Flashing                      | 37   | l.m.  |                  |            |
|          | 12mm x 300mm Fiber Cement Fascia Board             | 37   | l.m.  |                  |            |
|          | 6mm Thk One-sided Aluminum Foil Thermal Insulation | 55   | sq.m. |                  |            |
|          | 50mm x 50mm Cyclone Wire                           | 55   | sq.m. |                  |            |
|          | Tek screw  | 222  | piece |                  |            |
|          | Blind Rivets                                       | 110  | piece |                  |            |
|          | All Purpose Sealant                                | 1    | tube  |                  |            |
|          |  |      |       | Materials Cost B | ₱          |
|          |  |      |       | Labor Cost B     |            |
|          |  |      |       | Direct Cost B    | ₱          |
| C        | Architectural Works                                |      |       |                  |            |
|          | Floor Finishes                                     |      |       |                  |            |
|          | 400mm x 400mm Non-Skid Homogenous Floor            | 3    | sq.m. | ₱                | ₱          |
|          | 600mm x 600mm Non-Skid Homogenous Floor            | 42   | sq.m. |                  |            |
|          | Floor Topping For Preparation of Tiles             | 45   | sq.m. |                  |            |

| ITEM NO. | WORK DESCRIPTION AND SCOPE OF WORKS                                    | QTY. | UNIT  | UNIT COST        | TOTAL COST |
|----------|--|------|-------|------------------|------------|
|          | Wall Finishes  |      |       |                  |            |
|          | 400mm x 400mm Homogenous Wall Tiles                                    | 12   | sq.m. |                  |            |
|          | Ceiling Finishes   |      |       |                  |            |
|          | 6mm Thk Fiber Cement Board Including Metal Framing                     | 34   | sq.m. |                  |            |
|          |  |      |       | Materials Cost   | ₱          |
|          |  |      |       | Labor Cost       |            |
|          |  |      |       | Direct Cost      | ₱          |
|          | Installation of Doors  |      |       |                  |            |
|          | D1 - (0.80m x 2.10m) Panel Door  | 2    | set   | ₱                | ₱          |
|          | D2 - (0.60m x 2.10m) PVC Door with Louver                              | 1    | set   |                  |            |
|          | Door Jambs   |      |       |                  |            |
|          | D1 - Panel Door Wooden Jamb  | 2    | set   |                  |            |
|          | Hardwares and Accessories  |      |       |                  |            |
|          | Door Hinges, Heavy Duty, Stainless                                     | 9    | set   |                  |            |
|          | Door Knob, Lever Type, Stainless                                       | 3    | set   |                  |            |
|          | Installation of Windows  |      |       |                  |            |
|          | W1 - (1.2m x 1.2m) Steel Casement Window with screen                   | 2    | set   |                  |            |
|          | W2 - (1.8m x 1.2m) Steel Casement Window with screen                   | 1    | set   |                  |            |
|          |  |      |       | Materials Cost   | ₱          |
|          |  |      |       | Labor Cost       |            |
|          |  |      |       | Subtotal         | ₱          |
|          | Painting Works   |      |       |                  |            |
|          | Epoxy Enamel Paint Finish (Steel Surfaces)                             | 12   | sq.m. | ₱                | ₱          |
|          | Elastomeric Paint Finish (Exterior Walls)                              | 86   | sq.m. |                  |            |
|          | Flat Latex Paint Finish  |      |       |                  |            |
|          | Slab Soffit  | 34   | sq.m. |                  |            |
|          | Fabricated Materials   |      |       |                  |            |
|          | 1.2m x 2m Book Shelf   | 3    | sq.m. |                  |            |
|          | Countertop   | 4    | l.m.  |                  |            |
|          | Letterings   |      |       |                  |            |
|          | 50mm THK Emboss Stainless Steel Lettering "ZEBRA DAY CARE" ( H = 0.15) | 12   | set   |                  |            |
|          |  |      |       | Materials Cost   | ₱          |
|          |  |      |       | Labor Cost       |            |
|          |  |      |       | Direct Cost      | ₱          |
|          | Painting Works   |      |       |                  |            |
|          | Mural Painting   | 92   | sq.m. | ₱                | ₱          |
|          |  |      |       | Direct Cost      | ₱          |
|          |  |      |       | Materials Cost C | ₱          |
|          |  |      |       | Labor Cost C     |            |
|          |  |      |       | Direct Cost C    | ₱          |
| D        | Sanitary/ Plumbing Works   |      |       |                  |            |
|          | Sewer Line System  |      |       |                  |            |



| ITEM NO. | WORK DESCRIPTION AND SCOPE OF WORKS | QTY. | UNIT  | UNIT COST | TOTAL COST |
|----------|-------------------------------------|------|-------|-----------|------------|
|          | 50mmØ PVC Pipe with Hub             | 6    | piece | ₱         | ₱          |
|          | 75mmØ PVC Pipe with Hub             | 3    | piece |           |            |
|          | 100mmØ PVC Pipe with Hub            | 3    | piece |           |            |
|          | 50mmØ No-Hub Coupling               | 2    | piece |           |            |
|          | 75mmØ x 50mmØ Wye                   | 6    | piece |           |            |
|          | 100mmØ x 50mmØ Wye                  | 2    | piece |           |            |
|          | 100mmØ x 75mmØ Wye                  | 3    | piece |           |            |
|          | 100mmØ x 100mmØ Wye                 | 4    | piece |           |            |
|          | 50mmØ x 50mmØ Tee                   | 10   | piece |           |            |
|          | 75mmØ x 50mmØ Tee                   | 3    | piece |           |            |
|          | 100mmØ x 50mmØ Tee                  | 2    | piece |           |            |
|          | 50mmØ 1/4 Bend                      | 18   | piece |           |            |
|          | 50mmØ 1/8 Bend                      | 22   | piece |           |            |
|          | 75mmØ 1/8 Bend                      | 18   | piece |           |            |
|          | 100mmØ 1/8 Bend                     | 7    | piece |           |            |
|          | 75mmØ Cleanout                      | 1    | piece |           |            |
|          | 100mmØ Cleanout                     | 1    | piece |           |            |
|          | 50mmØ P-Trap                        | 5    | piece |           |            |

| ITEM NO. | WORK DESCRIPTION AND SCOPE OF WORKS                                     | QTY. | UNIT  | UNIT COST        | TOTAL COST |
|----------|---|------|-------|------------------|------------|
|          | Waterline System  |      |       |                  |            |
|          | 20mmØ PPR Pipe  | 4    | piece |                  |            |
|          | 20mmØ x 20mmØ Tee Equal   | 9    | piece |                  |            |
|          | 20mmØ 90° Elbow   | 23   | piece |                  |            |
|          | 20mmØ x 12mm Ø Female Threaded Tee                                      | 3    | piece |                  |            |
|          | 20mmØ End Cap   | 3    | piece |                  |            |
|          | 20mmØ Union Patent  | 1    | piece |                  |            |
|          | 20mmØ Coupling  | 8    | piece |                  |            |
|          | 20mmØ Male Adaptor  | 5    | piece |                  |            |
|          | Valve and Appurtenances   |      |       |                  |            |
|          | 20mmØ Gate Valve PPR  | 1    | piece |                  |            |
|          | Fixtures  |      |       |                  |            |
|          | Bidet, Heavy-Duty, Stainless Steel (Water Efficient)                    | 1    | unit  |                  |            |
|          | Floor Drain, 100mm x 100mm Stainless Steel                              | 4    | piece |                  |            |
|          | Kitchen Sink Faucet, Lever Type Stainless, Heavy Duty (Water Efficient) | 1    | piece |                  |            |
|          | Grease Trap, 5GPM, Heavy Duty, with Accessories                         | 1    | set   |                  |            |
|          | Hose Bibb, Lever-Type Heavy Duty Stainless Steel (Water Efficient)      | 6    | piece |                  |            |
|          | Kitchen Sink, Single  | 1    | piece |                  |            |
|          | Lavatory Faucet, Lever Type, Stainless Heavy Duty (Water Efficient)     | 1    | piece |                  |            |
|          | Lavatory, Wall Hung (Kiddie)  | 1    | set   |                  |            |
|          | Water Closet, Tank Type (Kiddie)  | 1    | set   | 5,475.00         | 5,475.00   |
|          | Hardware and Accessories  |      |       |                  |            |
|          | Angle Valve, Two-Way Stainless Steel                                    | 1    | piece |                  |            |
|          | Angle Valve, Single-Way Stainless Steel                                 | 2    | piece |                  |            |
|          | Metal Door Hook   | 1    | piece |                  |            |
|          | Flexible Hose, Stainless  | 3    | piece |                  |            |
|          | Miscellaneous   |      |       |                  |            |
|          | 400cc Solvent Cement  | 2    | can   |                  |            |
|          | Hacksaw Blade   | 4    | piece |                  |            |
|          | Teflon Tape   | 7    | roll  |                  |            |
|          | Waste Cloth   | 2    | kg    |                  |            |
|          |   |      |       | Materials Cost D | ₱          |
|          |   |      |       | Labor Cost D     |            |
|          |   |      |       | Direct Cost D    | ₱          |
| E        | Electrical Works  |      |       |                  |            |
|          | Lighting and Power System   |      |       |                  |            |
|          | Roughing-ins  |      |       |                  |            |
|          | 20mmØ PVC Pipe  | 90   | piece | ₱                | ₱          |
|          | 25mmØ IMC Pipe  | 5    | piece |                  |            |
|          | Fittings & Accessories  |      |       |                  |            |
|          | 20mmØ PVC Adaptor   | 90   | piece |                  |            |
|          | 20mmØ PVC Locknut & Bushing   | 90   | pair  |                  |            |
|          | 25mmØ IMC Locknut & Bushing   | 5    | pair  |                  |            |

| ITEM NO. | WORK DESCRIPTION AND SCOPE OF WORKS         | QTY. | UNIT  | UNIT COST | TOTAL COST |
|----------|---|------|-------|-----------|------------|
|          | 50mm x 100mm Metal Utility Box              | 15   | piece |           |            |
|          | 100mm x 100mm Metal Junction Box with cover | 20   | piece |           |            |
|          | Wires and Cables                            |      |       |           |            |
|          | 3.5mm <sup>2</sup> THHN Wire                | 4    | roll  |           |            |
|          | 14mm <sup>2</sup> THHN Wire                 | 30   | l.m.  |           |            |
|          | 3.5mm <sup>2</sup> TW Wire                  | 3    | roll  |           |            |
|          | 8.0mm <sup>2</sup> TW Wire                  | 20   | l.m.  |           |            |
|          | Lighting fixtures (Energy Efficient)        |      |       |           |            |
|          | T5, 28w LED Tube light                      | 12   | piece |           |            |
|          | 6" Ø Round Recessed Pinlight LED            | 1    | piece |           |            |
|          | Emergency Light                             | 1    | piece |           |            |
|          | Exit Light                                  | 1    | piece |           |            |
|          | Wiring Devices and Appliances               |      |       |           |            |
|          | Orbit Fan, Heavy Duty With Selector Switch  | 2    | piece |           |            |
|          | Outlet with Grounding , Two-gang            | 5    | piece |           |            |
|          | Switch w/ plate & cover, One pole           | 3    | piece |           |            |
|          | Switch w/ plate & cover, Three way          | 2    | piece |           |            |
|          | Panel board                                 |      |       |           |            |
|          | Circuit Breaker                             |      |       |           |            |
|          | 20AT, 2P, 230V, Bolt-on                     | 1    | piece |           |            |
|          | Pipe Hangers & Supports                     |      |       |           |            |
|          | Horizontal Layout of Pipe                   | 15   | l.m.  |           |            |
|          | Vertical Layout of Pipe                     | 2    | l.m.  |           |            |

| ITEM NO. | WORK DESCRIPTION AND SCOPE OF WORKS          | QTY. | UNIT  | UNIT COST                 | TOTAL COST |
|----------|--|------|-------|---------------------------|------------|
|          | Miscellaneous & Consumables                  |      |       |                           |            |
|          | 400cc Solvent Cement                         | 2    | can   |                           |            |
|          | All around Sealant                           | 2    | can   |                           |            |
|          | Electrical Tape                              | 16   | roll  |                           |            |
|          | GI Tie Wire, Ga. 16 (for wire/cable pulling) | 3    | kg    |                           |            |
|          | Hacksaw Blade                                | 5    | piece |                           |            |
|          | Masking Tape                                 | 5    | piece |                           |            |
|          | Torch w/ Butane                              | 2    | set   |                           |            |
|          | Paint Thinner                                | 1    | lit   |                           |            |
|          | Pulling Lubricant                            | 1    | can   |                           |            |
|          | Rubber Tape                                  | 5    | roll  |                           |            |
|          |  |      |       | Material Cost E           | ₱          |
|          |  |      |       | Labor Cost E              |            |
|          |  |      |       | Direct Cost E             | ₱          |
|          |  |      |       | <b>Materials Cost III</b> | ₱          |
|          |  |      |       | <b>Labor Cost III</b>     |            |
|          |  |      |       | <b>Direct Cost III</b>    | ₱          |

**SUMMARY**

| ITEM NO      | WORK DESCRIPTION AND SCOPE OF WORKS   | TOTAL COST   |
|--------------|---|--|
| I            | GENERAL REQUIREMENTS  | ₱  |
| II           | CONSTRUCTION OF HAND WASHING FACILITY   |  |
| III          | REHABILITATION OF DAY CARE CENTER   |  |
| <b>NOTE:</b> | <ul style="list-style-type: none"> <li>Strictly enforce health protocols relative to the latest applicable DPWH memorandum</li> </ul> | <p align="center"><b>TOTAL DIRECT COST</b> ₱</p> <p align="center">Overhead, Contingencies and<br/>Miscellaneous and Consumables<br/>Expenses (OCM)<br/>Profit<br/>VAT</p> |
|              |   | <p align="center"><b>TOTAL ESTIMATED COST</b> ₱</p>  |

## ***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]*

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**BID FORM**

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

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

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

- a. We have no reservation to the PBDs, including the Supplemental or Bid Bulletins, for the Procurement Project: *[insert name of contract]*;
- b. We offer to execute the Works for this Contract in accordance with the PBDs;
- c. The total price of our Bid in words and figures, excluding any discounts offered below is: *[insert information]*;
- d. The discounts offered and the methodology for their application are: *[insert information]*;
- e. The total bid price includes the cost of all taxes, such as, but not limited to: *[specify the applicable taxes, e.g. (i) value added tax (VAT), (ii) income tax, (iii) local taxes, and (iv) other fiscal levies and duties]*, which are itemized herein and reflected in the detailed estimates,
- f. Our Bid shall be valid within the a period stated in the PBDs, and it shall remain binding upon us at any time before the expiration of that period;
- g. If our Bid is accepted, we commit to obtain a Performance Security in the amount of *[insert percentage amount]* percent of the Contract Price for the due performance of the Contract, or a Performance Securing Declaration in lieu of the the allowable forms of Performance Security, subject to the terms and conditions of issued GPPB guidelines<sup>1</sup> for this purpose;
- h. We are not participating, as Bidders, in more than one Bid in this bidding process, other than alternative offers in accordance with the Bidding Documents;
- i. We understand that this Bid, together with your written acceptance thereof included in your notification of award, shall constitute a binding contract between us, until a formal Contract is prepared and executed; and
- j. We understand that you are not bound to accept the Lowest Calculated Bid or any other Bid that you may receive.

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<sup>1</sup> 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]*

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

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

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

I/We, the undersigned, declare that:

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

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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]*

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**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]*

## Performance Securing Declaration (Revised)

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

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

### PERFORMANCE SECURING DECLARATION

Invitation to Bid: [Insert Reference Number indicated in the Bidding Documents] To:  
[Insert name and address of the Procuring Entity]

I/We, the undersigned, declare that:

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

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

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

**[Jurat]**

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

LIST OF ALL ON-GOING GOVERNMENT AND PRIVATE CONTRACTS

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

| PROJECT TITLE<br>(Name of the Contract)<br>& EXACT PROJECT LOCATION | DATE OF<br>CONTRACT | CONTRACT<br>DURATION | PROJECT OWNER &<br>POSTAL ADDRESS | NATURE OF WORK | CONTRACTOR'S ROLE<br>(SOLE CONTRACTOR, SUBCONTRACTOR,<br>PARTNER IN A JV)<br>and PERCENTAGE OF<br>PARTICIPATION | TOTAL<br>CONTRACT<br>VALUE AT<br>AWARD | DATE OF<br>COMPLETION or<br>ESTIMATED<br>COMPLETION TIME | TOTAL<br>CONTRACT<br>VALUE AT<br>COMPLETION<br>IF APPLICABLE | PERCENTAGE                                 |                           | VALUE OF OUTSTANDING<br>WORKS (IN PHP) |
|---|---------------------|----------------------|-----------------------------------|----------------|---|--|--|--|--|---------------------------|--|
|   |                     |                      |                                   |                |   |  |  |  | ACTUAL<br>ACCOMPLISHMENT                   | PLANNED<br>ACCOMPLISHMENT |  |
|   |                     |                      |                                   |                |   |  |  |  |  |                           |  |
|   |                     |                      |                                   |                |   |  |  |  | TOTAL AMOUNT (Php) OF<br>OUTSTANDING WORKS |                           |  |

PHOTOCOPY ADDITIONAL FORMS, IF NECESSARY



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

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

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

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

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

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

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

| PROJECT TITLE<br>(Name of the Contract)<br>& EXACT PROJECT LOCATION | DATE OF<br>CONTRACT | CONTRACT<br>DURATION | PROJECT OWNER & POSTAL<br>ADDRESS | NATURE OF WORK | CONTRACTOR'S ROLE<br>(SOLE CONTRACTOR, SUBCONTRACTOR,<br>PARTNER IN A JV)<br>and PERCENTAGE OF<br>PARTICIPATION | TOTAL<br>CONTRACT<br>VALUE AT<br>AWARD | DATE OF<br>COMPLETION or<br>ESTIMATED<br>COMPLETION TIME | TOTAL<br>CONTRACT<br>VALUE AT<br>COMPLETION<br>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<br>ATTAINMENT | TYPE OF<br>CONSTRUCTION<br>EXPERIENCE | NO.OF YEARS<br>WITH THE<br>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 | _____ |
| <b>NET FINANCIAL CONTRACTING CAPACITY</b>                              |        | 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 AWARDED BUT NOT YET 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 \_\_\_\_\_

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Book No. ;  
Series of 2020

\_\_\_\_\_  
Notary Public

