REPUBLIC OF THE PHILIPPINES
QUEZON CITY GOVERNMENT
BIDS AND AWARDS COMMITTEE –
INFRASTRUCTURE AND CONSULTANCY SERVICES

PHILIPPINE BIDDING DOCUMENTS

Procurement of INFRASTRUCTURE PROJECTS

Government of the Republic of the Philippines

PROPOSED CONSTRUCTION OF FOUR (4) STOREY WITH DECK GALAS PUBLIC MARKET BUILDING 2 (COMPLETION PHASE) AT BARANGAY SAN ISIDRO GALAS

Project number:
25-00009

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.

Republika ng Pilipinas
Lungsod Quezon
BIDS AND AWARDS COMMITTEE ON INFRASTRUCTURE & CONSULTANCY
Second Floor, Civic Center Building F, Quezon City Hall Complex, Elliptical Road, Quezon City
8988-4242 local 8712 / 8710 / 8709
bacinfra.procurement@quezoncity.gov.ph

March 04, 2025

Invitation to Bid

		Project Name	Location	Amount	Duration (Cal. Days)	Office	Source Fund
Building – Small B							
1	25-00005	Proposed Rehabilitation of Quezon City Public Library at Barangay Commonwealth	Commonwealth	₱7,603,713.18	120	Department of Engineering	General Fund - Office of the City Mayor (20% Community Development Fund)
2	25-00006	Proposed Construction of Waiting Shed at Various Barangays in District 3	Various Barangays	₱9,171,107.19	180	Department of Engineering	General Fund - Department of Engineering
3	25-00007	Proposed Construction of Various Facilities in Quezon City University - Batasan Campus at Barangay Batasan Hills	Batasan Hills	₱14,114,764.69	240	Department of Engineering	Trust Fund - Quezon City University
Building – Medium A							
4	25-00008	Proposed Rehabilitation of Tech Voc Building at Quezon City University (QCU) in Barangay San Bartolome	San Bartolome	₱56,903,811.88	300	Department of Engineering	Trust Fund - Quezon City University
Building – Medium B							
5	25-00009	Proposed Construction of Four (4) Storey with Deck Galas Public Market Building 2 (Completion Phase) at Barangay San Isidro Galas	San Isidro Galas	₱176,699,374.45	420	Department of Engineering	General Fund - Office of the City Mayor (20% Community Development Fund)
Electrical Work – Small B							
6	25-00010	Proposed Installation of Streetlights in Barangay Sauyo, Pasong Tamo, Culiat, and Sangandaan	Sauyo, Pasong Tamo, Culiat, Sangandaan	₱9,706,803.42	60	Department of Engineering	General Fund - Office of the City Mayor (20% Community Development Fund)
7	25-00011	Proposed Installation of Streetlights in Barangay Fairview, Barangay Sta. Monica, Barangay Kaligayahan and Barangay San Agustin	Fairview, Sta. Monica, Kaligayahan, San Agustin	₱22,709,155.81	180	Department of Engineering	General Fund - Office of the City Mayor (20% Community Development Fund)

Electrical Work – Medium A							
8	25-00012	Proposed Installation of Streetlights in Barangay Damar, Veterans Village, San Antonio, Bahay Toro, Sta. Teresita and Ramon Magsaysay	Damar, Veterans Village, San Antonio, Bahay Toro, Sta. Teresita, Ramon Magsaysay	₱37,413,480.05	240	Department of Engineering	General Fund - Office of the City Mayor (20% Community Development Fund)
Flood Control – Small B							
9	25-00013	Proposed Rehabilitation of Road and Drainage at 204 Kasunduan Extension in Barangay Commonwealth	Commonwealth	₱3,117,024.83	150	Department of Engineering	General Fund - Office of the City Mayor (20% Community Development Fund)
10	25-00014	Proposed Rehabilitation of Road and Drainage at Alley 1 and 2, Lower Everlasting Street in Barangay Commonwealth	Commonwealth	₱5,592,654.73	180	Department of Engineering	General Fund - Office of the City Mayor (20% Community Development Fund)
11	25-00015	Proposed Rehabilitation of Drainage System at San Juan and San Pedro Street (Pilaring Street to Susana Street) in Barangay Gulod	Gulod	₱22,517,341.80	150	Department of Engineering	General Fund - Office of the City Mayor (20% Community Development Fund)
12	25-00016	Proposed Drainage System at Road 23 from Dead End (Sta. 0+000) to Shorthorn Street (Sta. 0+383) in Barangay Bahay Toro	Bahay Toro	₱28,995,298.45	150	Department of Engineering	General Fund - Office of the City Mayor (20% Community Development Fund)
Flood Control – Medium A							
13	25-00017	Proposed Rehabilitation of Road and Drainage at Battalion Street, Patibay 1 Hoa, and Filinvest 2 Road in Barangay Batasan Hills	Batasan Hills	₱39,039,636.24	210	Department of Engineering	General Fund - Office of the City Mayor (20% Community Development Fund)
14	25-00018	Proposed Drainage System at Malac Street in Barangay Masambong	Masambong	₱69,145,136.96	270	Department of Engineering	General Fund - Office of the City Mayor (20% Community Development Fund)
Park – Small B							
15	25-00019	Proposed Landscaping Development of M.I.C.E Center Building	Central	₱7,624,257.54	135	Parks Development and Administration Department	General Fund - Office of the City Mayor (20% Community Development Fund)

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 **05 March 2025 (Wednesday)** from given address and website/s below *and upon payment of a non-refundable fee for the Bidding Documents, pursuant to the latest Guidelines issued by the GPPB.* The Procuring Entity shall allow the bidder to present its proof of payment for the fees *presented in person.*

STANDARD RATES:

Approved Budget for the Contract	**Maximum Cost of Bidding Documents (in Philippine Peso)**
More than 500,000 up to 1 Million	1,000.00
More than 1 Million up to 5 Million	5,000.00
More than 5 Million up to 10 Million	10,000.00
More than 10 Million up to 50 Million	25,000.00
More than 50 Million up to 500 Million	50,000.00
More than 500 Million	75,000.00

The following are the requirements for purchase of Bidding Documents;

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

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

6. The ***QC- BAC- INFRASTRUCTURE & CONSULTANCY*** will hold a Pre-Bidding Conference on **March 13, 2025** at **09:00 AM** at **2nd Floor, Procurement Department-Bidding Room, Finance Building, Quezon City Hall Compound** or we encourage the prospective bidders to join through our **Virtual Conference (ZOOM APP)** which shall be open to prospective bidders.

   Virtual Conference (ZOOM APP)
   Meeting ID: 854 9489 0133
   Password: 273320

7. Bids must be duly received by the BAC Secretariat through manual submission at the office address as indicated below, on or before **March 27, 2025 – 9:00 AM.** 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 **March 27, 2025 – 10:00 AM** at **2nd Floor, Procurement Department-Bidding Room, Finance Building, Quezon City Hall Compound** and/or via Zoom. Bids will be opened in the presence of the bidders' representatives who choose to attend the activity.

   Virtual Conference (ZOOM APP)
   Meeting ID: 810 3646 5257
   Password: 201522

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

11. For further information, please refer to:

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

12. You may visit the following websites:

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

By:

MS. MARIAN C. ORAYANI
Chairperson, BAC-Infrastructure and Consultancy

Section II. Instructions to Bidders

Notes on the Instructions to Bidders

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

1. Scope of Bid

The Procuring Entity, **Quezon City Government** invites Bids for the **PROPOSED CONSTRUCTION OF FOUR (4) STOREY WITH DECK GALAS PUBLIC MARKET BUILDING 2 (COMPLETION PHASE) AT BARANGAY SAN ISIDRO GALAS,** with Project Identification Number **25-00009.**

[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 **2025** in the amount of **One Hundred Seventy-Six Million Six Hundred Ninety-Nine Thousand Three Hundred Seventy-Four Pesos and 45/100 Centavos Only (P 176,699,374.45).**

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 **March 13, 2025 at 09:00 AM at 2nd Floor, Procurement Department-Bidding Room, Finance Building, Quezon City Hall Compound** and/or we encourage the prospective bidders to join through our **Virtual Conference (ZOOM APP) Meeting ID: 854 9489 0133 Password: 273320**

9. Clarification and Amendment of Bidding Documents

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

10. Documents Comprising the Bid: Eligibility and Technical Components

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

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

10.3. A valid PCAB License is required, and in case of joint ventures, a valid special PCAB License, and registration for the type and cost of the contract for this

Project. Any additional type of Contractor license or permit shall be indicated in the **BDS**.

10.4. A List of Contractor's key personnel (e.g., Project Manager, Project Engineers, Materials Engineers, and Foremen) assigned to the contract to be bid, with their complete qualification and experience data shall be provided. These key personnel must meet the required minimum years of experience set in the **BDS**.

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

11. Documents Comprising the Bid: Financial Component

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

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

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

12. Alternative Bids

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

13. Bid Prices

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

14. Bid and Payment Currencies

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

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

a. Philippine Pesos.

15. Bid Security

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

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

16. Sealing and Marking of Bids

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

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

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

17. Deadline for Submission of Bids

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

18. Opening and Preliminary Examination of Bids

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

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

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

19. Detailed Evaluation and Comparison of Bids

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

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

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

20. Post Qualification

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

21. Signing of the Contract

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

Section III. Bid Data Sheet

Notes on the Bid Data Sheet (BDS)

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

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

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

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

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

Bid Data Sheet

<table>
<tr><td>ITB Clause</td><td></td></tr>
<tr><td>5.2</td><td>For this purpose, similar contracts shall refer to contracts which have the same major categories of work.</td></tr>
<tr><td>7.1</td><td>Subcontracting is not allowed.</td></tr>
<tr><td>10.3</td><td>No additional contractor license or permit is required

In addition, eligible bidders shall qualify or comply with the following:

1. Bidders with valid Philippine Contractors Accreditation Board (PCAB)

Type

Building - Medium B</td></tr>
<tr><td>10.4</td><td>The minimum work experience requirements for key personnel are the following:

<table>
<tr><th>Qty.</th><th>Key Personnel</th><th>General Experience</th><th>Relevant Experience</th></tr>
<tr><td>1</td><td>Project Manager</td><td>3 years</td><td>3 years</td></tr>
<tr><td>1</td><td>Project-in-Charge (Project Engineer)</td><td>3 years</td><td>3 years</td></tr>
<tr><td>1</td><td>General Foreman</td><td>3 years</td><td>3 years</td></tr>
<tr><td>1</td><td>Trade Engineers / Leadman for Civil Works</td><td>3 years</td><td>3 years</td></tr>
<tr><td>1</td><td>Trade Engineers / Leadman for Electrical Works</td><td>3 years</td><td>3 years</td></tr>
<tr><td>1</td><td>Trade Engineers / Leadman for Mechanical Works</td><td>3 years</td><td>3 years</td></tr>
<tr><td>1</td><td>Safety Officer</td><td>3 years</td><td>3 years</td></tr>
<tr><td>1</td><td>DPWH duly accredited Material Engineer/QA/QC Engineer</td><td>3 years</td><td>3 years</td></tr>
<tr><td>1</td><td>Cost Engineer/Project Scheduler</td><td></td><td></td></tr>
</table>

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.</td></tr>
<tr><td>10.5</td><td>The minimum major equipment requirements are the following:

<table>
<tr><th>Equipment</th><th>Capacity</th><th>Number of Units</th></tr>
<tr><td>Dumptruck</td><td>12 yd³</td><td>1</td></tr>
<tr><td>Backhoe</td><td>0.80 cu.m.</td><td>1</td></tr>
<tr><td>Air Compressor</td><td></td><td>1</td></tr>
<tr><td>Jackhammer</td><td></td><td>1</td></tr>
<tr><td>Bar Cutter</td><td></td><td>4</td></tr>
</table></td></tr>
</table>

	Bar Bender 4 One Bagger Mixer 1 Welding Machine 4 Cutting Outfit Set 4 Pump Truck 6,000-10,000 gal 1 ***In addition, the bidder must execute an affidavit of undertaking duly notarized stating that the foregoing equipment shall be used exclusively for the project until its completion. Please see attached bid forms.***
12	*[Insert Value Engineering clause if allowed.]*
15.1	The bid security shall be in the form of a Bid Securing Declaration with project number, or any of the following forms and amounts: a) The amount of not less than Php **3,533,987.49** or equivalent to two percent (2%) of ABC if bid security is in cash, cashier's/manager's check, bank draft/guarantee or irrevocable letter of credit; or b) The amount of not less than Php **8,834,968.72** or equivalent to five percent (5%) of ABC if bid security is in Surety Bond.
19.2	**Partial bid is not allowed.** The infrastructure project is packaged in a single lot and the lot shall not be divided into sub-lots for the purpose of bidding, evaluation, and contract award.
20	No additional requirement.
21	**Additional Contract Documents relevant to the Project as required:** **1. Construction Schedule and S-curve,** **2. Manpower Schedule,** **3. Construction Methods,** **4. Equipment Utilization Schedule,** **5. PERT/CPM or other acceptable tools of project scheduling, shall be included in the submission of Technical Proposal.**

Section IV. General Conditions of Contract

Notes on the General Conditions of Contract

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

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

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

1. Scope of Contract

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

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

2. Sectional Completion of Works

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

3. Possession of Site

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

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

4. The Contractor's Obligations

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

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

5. Performance Security

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

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

6. Site Investigation Reports

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

7. Warranty

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

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

8. Liability of the Contractor

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

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

9. Termination for Other Causes

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

10. Dayworks

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

11. Program of Work

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

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

12. Instructions, Inspections and Audits

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

13. Advance Payment

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

14. Progress Payments

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

15. Operating and Maintenance Manuals

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

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

Section V. Special Conditions of Contract

Notes on the Special Conditions of Contract

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

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

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

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

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

Special Conditions of Contract

GCC Clause	
2	Completion of work shall be within Four Hundred Twenty (420) calendar days.
4.1	The Procuring Entity shall give possession of all parts of the Site to the Contractor upon receipt of the Notice to Proceed.
6	The site investigation reports are: *[list here the required site investigation reports.]*
7.2	*[Select one, delete the other.]* *[In case of permanent structures, such as buildings of types 4 and 5 as classified under the National Building Code of the Philippines and other structures made of steel, iron, or concrete which comply with relevant structural codes (e.g., DPWH Standard Specifications), such as, but not limited to, steel/concrete bridges, flyovers, aircraft movement areas, ports, dams, tunnels, filtration and treatment plants, sewerage systems, power plants, transmission and communication towers, railway system, and other similar permanent structures:]* Fifteen (15) years. *[In case of semi-permanent structures, such as buildings of types 1, 2, and 3 as classified under the National Building Code of the Philippines, concrete/asphalt roads, concrete river control, drainage, irrigation lined canals, river landing, deep wells, rock causeway, pedestrian overpass, and other similar semi-permanent structures:]* Five (5) years. *[In case of other structures, such as bailey and wooden bridges, shallow wells, spring developments, and other similar structures:]* Two (2) years.
10	Dayworks are applicable at the rate shown in the Contractor's original Bid.
13	The amount of the advance payment is no more that fifteen percent (15%) of the Contract Price subject to approval by the HOPE and compliance with the conditions under RA 9184 and its IRR.
14	No further instructions.
15.1	The date by which operating and maintenance manuals are required is *thirty (30) days* The date by which "as built" drawings are required as part of final payment
15.2	The amount to be withheld for failing to produce "as built" drawings and/or operating and maintenance manuals by the date required is ten (10%) percent of the contract price.

Section VI. Specifications

Notes on Specifications

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

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

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

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

Sample Clause: Equivalency of Standards and Codes

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

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

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

Republic of the Philippines
Quezon City
DEPARTMENT OF ENGINEERING
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Diliman, Central 1100 Quezon City
Trunkline: +63 2 8988 4242
E-mail address: engineering@quezoncity.gov.ph

PROJECT TITLE : **PROPOSED CONSTRUCTION OF FOUR (4) STOREY WITH DECK GALAS PUBLIC MARKET BUILDING 2 (COMPLETION PHASE) AT BARANGAY SAN ISIDRO GALAS**

LOCATION : **BARANGAY SAN ISIDRO GALAS, DISTRICT 4, QUEZON CITY**

GENERAL AND SPECIAL CONDITIONS OF CONTRACT AND TECHNICAL SPECIFICATIONS

Table of Contents

I. GENERAL CONDITIONS

1. DEFINITIONS

A. OWNER : Local Government of Quezon City

B. CONTRACTOR: Any person, entity, company, partnership, or association that enters an agreement with the Owner to provide materials, labor, tools, equipment, machinery, and other necessary facilities for the construction and finalization of the project as outlined in the accompanying plans and drawings.

2. EXAMINATION OF MEMBER

The Contractor must thoroughly inspect the premises prior to submitting any bids to ensure they have the complete understanding of the existing conditions.

3. LOCATION

The PROPOSED CONSTRUCTION OF FOUR (4) STOREY WITH BASEMENT GALAS PUBLIC MARKET BUILDING 1 AT BARANGAY SAN ISIDRO GALAS is situated and must be refered to the approved Location Plan.

4. EXECUTION, CORRELATION AND INTENT OF DOCUMENTS

A. The Contract Documents shall be signed by all parties in an adequate number of copies. Should any party fail to sign any item within the set of contract documents, identification by the Implementing Agency shall serve as sufficient validation.

B. The items, specifications, and all other documents that constitute the contract are interrelated. Anything depicted in the plans but not explicitly detailed in the specifications, or vice versa, and anything not expressly stated in either but inherently implied, shall be provided or executed as if explicitly shown and stated in both, without additional cost. Where dimensions are provided numerically, they take precedence over measurements taken by scale.

C. Carry out the work in strict accordance with the agreement, refraining from making any alterations or deviations without prior approval from the Implementing Agency.

D. The Contractor is responsible for verifying and cross-checking all dimensions, particularly those specified in the plans. Any discrepancies found during the execution of the work will be the Contractor's direct responsibility.

5. DETAILED DRAWINGS AND INSTRUCTIONS

The supplementay documents and/or additional details / drawings and instructions necessary for the proper execution of the work shall be provided at the jobsite as required. These supplementary documents shall have equal authority as if they were originally included.

6. PLANS AND PROJECT SITE

Ensure that one (1) complete set of approved plans, specifications, supplementary detail drawings, and instructions is kept in good order and condition at the project site.

7. SHOP DRAWINGS

During construction, the Implementing Agency and/or Contractor shall provide shop drawings if deemed necessary. The Contractor must refrain from installing any item requiring shop drawings until such drawings have been duly approved by the Implementing Agency.

8. REVISIONS

The Owner and the Implementing Agency may alter or revise the plans, including changes during the project's progress, without breaching the terms of the agreement as much as possible within the project schedule. Any additional costs incurred for labor or materials will be added to or deducted from the original contract price as necessary and validated.

9. PROJECT SCHEDULE

The Contractor is required to prepare and submit to the Implementing Agency, prior to commencing project operations, a comprehensive work schedule outlining the entire construction duration. This schedule must include estimated timeframes for completing each project stage and phase (Milestone).

10. WORKMANSHIP

The project shall be completed with top-tier workmanship in strict accordance with the plans and specifications, ensuring full approval and acceptance from the Implementing Agency.

11. MATERIALS

Only materials of the highest quality for their respective types shall be used unless otherwise stated in the plans and technical specifications. They must be stored and protected adequately to prevent damage.

12. INSPECTION OF WORK

The Contractor shall make the work accessible for inspection by the Implementing Agency, the Owner, and other authorized personnel overseeing the project.

13. SUBSTANDARD WORK

Any work or materials deemed unacceptable by the Architect must be promptly removed and replaced with suitable alternatives at no additional cost. Disposed materials must be promptly removed from the premises.

14. LAWS AND REGULATIONS

The Contractor is responsible for adhering to all current labor laws and regulations. They shall indemnify the Owner from any associated liabilities, and at their own cost, promptly settle all taxes, fees, and licenses owed to the government—both national and local—resulting from their work on the project.

15. MANNER OF PAYMENT

Payments to the Contractor will be made based on the progress of work completed within each period, subject to verification, approval, and recommendation by the Implementing Agency.

16. RETENTION MONEY

Progress payments will have a ten percent (10%) retention withheld. The retained funds will be released upon satisfactory completion of the work and issuance of the Certificate of Final Completion and Acceptance.

17. TEMPORARY FACILITIES

The Contractor is responsible for arranging temporary water, power, and telephone services from local utility companies throughout the construction period. All associated costs is included in the contract and shall be shouldered by the Contractor. The Contractor must provide a temporary restroom in a discreet and sanitary manner, and it must be removed once the work is completed.

18. SITE CLEARING

The site must be clean, cleared and ready for occupancy prior to the issuance of the certificate of completion and acceptance. No construction debris must be left on the site premises.

19. TEMPORARY BARRICADES, SIGNAL LIGHTS, BILLBOARDS, ETC.

The contractor shall provide all necessary measures such as but not limited to temporary enclosures, billboards and safety signages that must be visible on the site premises.

20. PERFORMANCE AND GUARANTEE BOND

To ensure the Contractor's faithful performance under the contract, they must provide a Performance Bond equivalent to thirty percent (30%) of the contract price. The bond can be in the form of cash, manager's check, or surety bond, callable upon request.

21. TESTING AND COMMISSIONING

The Contractor shall ensure that comprehensive testing and commissioning of the equipment/system is included as an integral part of the performance obligations under this Contract. Testing shall be conducted in accordance with industry standards and shall verify that the equipment/system meets all specified performance criteria and operational requirements set forth in the Contract documents.

22. WARRANTY OBLIGATION

The Contractor hereby warrants that the equipment/system provided under this Contract shall be free from defects in materials and workmanship for a period stated in the technical documents such as but not limited to plans and technical specifications from the date of commissioning. This warranty includes, but is not limited to, ensuring that the equipment/system functions in accordance with its specifications and is suitable for its intended purpose as outlined in the Contract.

23. CONDITIONS OF WARRANTY

The warranty provided herein shall be subject to the following conditions: a. Any defect or non-conformance discovered during the warranty period shall be promptly reported to the Contractor in writing. b. The Contractor shall, at its own cost and expense, promptly repair or replace any defective parts or components of the equipment/system covered under this warranty. c. The warranty shall not cover damages or defects resulting from misuse, neglect, improper installation, alterations, accidents, or unauthorized repair or modification of the equipment/system.

24. QUESTIONS AND DISAGREEMENTS

Any questions or disputes between the Contractor and the Owner regarding the interpretation of the plans and specifications shall be referred to the Implementing Agency. The decision of the Implementing Agency on such matters shall be binding and final.

II. SPECIAL CONDITION

Apart from the warranty period covered by General Condition, hereunder, added Special Condition for the specific items.

EQUIPMENT	WARRANTY PERIOD	COVERAGE	TERMS AND CONDITIONS
Airconditioning Unit	One (1) year warranty on parts and labor. Five (5) years warranty for standard compressor part only.	Covered Components: • Compressor • Replacement • Service and Repairs •	• The warranty is void if the unit is altered, disassembled, reinstalled, or improperly installed or applied. • The warranty does not cover failures caused by surrounding equipment or facilities, or by defective components in the construction on which the unit is mounted. • The warranty does not cover damage caused by harmful objects.
Booster Pump	One (1) to Two (2) years for parts and labor	Covered Components: • Motor • Impeller • Casing Service and Repairs	•Improper installation or maintenance. • Damage caused by misuse, negligence, or accident. • Unauthorized modifications or repairs.
Pressure Tank	One (1) to Five (5) years, with some manufacturers offering longer warranties for certain parts or components.	Covered Components: • Tank • Bladder • Service and Repairs	•Improper installation or maintenance. • Damage caused by misuse, negligence, or accident. •Unauthorized modifications or repairs.
Overhead Tank	One (1) to Five (5) years, with some manufacturers offering longer warranties for certain parts or components.	Covered Components: • Tank • Bladder • Service and Repairs	•Improper installation or maintenance. • Damage caused by misuse, negligence, or accident. •Unauthorized modifications or repairs.
Passenger Elevator	One (1) to Three (3) years for parts and labor	Covered Components: • Motor Control System • Doors • Service and Repairs	•Improper installation or maintenance. • Damage caused by misuse, negligence, or accident. •Unauthorized modifications or repairs.

Note: The Contractor shall provide the complete contact details of the supplier for the above-mentioned equipment under Special Condition.

III. TECHNICAL SPECIFICATIONS

1. GENERAL REQUIREMENTS

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

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

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

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

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

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

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

H. Mobilization and Demobilization

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

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

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

J. Temporary Facilities and Utilities

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

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

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

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

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

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

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

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

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

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

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

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

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

M. A systematic approach for managing vehicular and pedestrian traffic within the project area shall be provided adhering to relevant regulations and standards, prioritizing the safety of workers, motorists, and pedestrians while maintaining the flow of traffic during construction activities. It shall delineate designated traffic routes, temporary signage, and traffic control measures such as flagging operations or temporary traffic signals.

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

2. SITE WORKS

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

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

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

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

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

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

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

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

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

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

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

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

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

3. CIVIL / STRUCTURAL WORKS

A. CONCRETE WORKS

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

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

3. Materials

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

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

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

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

4. Proportioning and Mixing

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

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

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

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

5. Forms

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

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

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

6. Placing Reinforcement:

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

7. Conveying and Placing Concrete:

a. Conveying – concrete shall be conveyed from mixer to forms as rapidly as applicable, by methods which will prevent segregation, or loss of ingredients. There will be no vertical drop greater than 1.5 meters except where suitable equipment is provided to prevent segregation and where specifically authorized.

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

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

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

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

8. Curing

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

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

9. Finishing

a. Concrete surfaces shall not be plastered unless otherwise indicated. Exposed concrete surfaces shall be formed with plywood, and after removal of forms, the surfaces shall be smooth, true to line and shall present or finished appearance except for minor defects which can be easily repaired with patching with cement mortar, or can be grounded to a smooth surface to remove all joint marks of the form works.
b. Concrete Slabs on Fill. The concrete slabs on fill shall be laid on a prepared foundation consisting of sub grade and granular fill with thickness equal to the thickness of the overlaying slab except when indicated.

10. Surface Finishes
    a. Defets: Repair formed surfaces by removing minor honeybombs, pits greater than one square inch surface area of 0.25-inch maximum depth, or otherwise defective areas.
    b. Floor slabs, pavements and miscellaneous construction: Unless otherwise specified, slab at the fountain area are straight to finish with waterproofing. Slope floors uniformly to drains where drains are provided. Depress the concrete base slab where Granite or Ceramic tiles are indicated.
    c. Finish: Place, consolidate and immediately strike-off concrete to obtain proper contour, grade and elevation. A set sufficient for floating and supporting the weight of the finisher and equipment.

11. Miscellaneous
    a. Construction joints: Locate joints to least impair strength; continue reinforcement across joints unless otherwise indicated.
    b. Expansion joints and contraction joints; For slab on grade, provide at edges of interior floor slab, adjacent to walls as indicated. Completely fill joints exposed to weather with joint filler material and joint sealant. Do not extend reinforcement or other embedded metal items bonded to the concrete through any expansion joints unless an expansion sleeve is used. Provide contraction joints, either formed or saw cut or cut with a jointing tool, to the indicated depth after the surface has been finished. Sawed joints shall be completed within 4 to 12 hours after concrete placement. Protect joints from intrusion of foreign matter.

12. Metal Works
    a. Metal works shall conform the approved plans and to the Standard Specifications.
    b. Comply with the latest edition of the following as applicable, unless otherwise specified or modified.
        i. American Institute of Steel Construction (AISC), 1978: Specification for the Design, Fabrication and Erection of Structural Steel for Buildings. Code of Standard Practice for Steel

Buildings and Bridges; Specification for Architecturally Exposed Structural Steel

ii. American Welding Society (AWS): Standard Welding Symbols A2. 0-68; Standard Welding Code D1.1-1973 (Rev 1-73 & 2-74) (To govern if in conflict with AISC).

iii. Research Council on Riveted and Bolted Joints of the Engineering Foundation (RCRBJ): Specification for Structural Joists using ASTM A-324-76s Bolts.

iv. Structural Steel Painting Council (SSPC): Painting Manual, Vol. 1: Good Painting Practice, Painting Manual, Vol. 2: Systems and Specifications.

c. Source Quality control

Errors of Shop Drawings, fabrication, correct fitting and alignment of the various metal items or component members shall be the responsibility of the Contractor. However, the contractor shall permit the Architect or an independent inspection agency, if engaged by the Owner, to inspect work in progress in his shop. Such inspections shall not relieve the Contractor of his responsibility to furnish materials and workmanship in accordance with the Contract Documents.

d. Product Delivery, Handling and Storage

Handle and store in such manner as to prevent damage or disfigurement. Store finished items or components above ground on platforms, pallets or other supports and protect from harmful elements.

e. Protection

The Contractor shall protect any existing work subject to damage during the installation of the specified work and shall adequately protect specified work during installation

f. Field Quality Control

Facilities shall be provided by the Contractor as needed for the proper inspection of the specified work, including temporary platforms, hoists, protective devices, electric current, etc. Improper workmanship, as determined by the Architect shall be corrected and replaced, at no additional cost to the Owner.

g. Materials

i. Products shall conform to the respective reference specifications and standards and to the requirements specified herein:

ii. Steel and Iron: If not specified otherwise, use standard mill-finished structural steel shapes or bar iron incompliance with AISC Specifications for Design, Fabrication and Erection of Structural Steel for Buildings.

iii. Bolts, Nuts Studs, and Rivets: ASTM A 325

iv. Screws: Fed. Spec FF-S-85, Fed. Spec. FF-S-92, and Fed. Spec. FF-S111

h. 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.

i. Measurements

Before fabrication, provide necessary field measurements and verify all measurements.

j. Metal 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, angles 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.

k. 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.

l. Shop Fabrication
Fabrication and assembly shall be done in the shop to the greatest extent possible.

m. Submittals
Shop drawings: Submit along with catalogue, cuts, templates and erection and installation details, including thickness, type, grade, class of metal and dimensions. Show construction details, reinforcement, anchorage, and installation with relation to the construction.

n. Qualification of Welders
In accordance with AWS D1. Using procedures, materials and equipment of the type required for the work.

o. Delivery and Storage
Protect from corrosion, deformation and other types of damage. Store items in an enclosed area free from contact with soil and weather. Contractor shall replace and remove damaged items with new items.

p. 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 lack weld exposed to connections.) Grind smooth visible weld in finished installation.

q. Metal Purlins
Metal purlins shall be of high-grade galvanized steel with minimum tensile strength of 275 MPa, 2mm in thickness

B. MASONRY WORKS

1. Masonry Units (Concrete Hollow Blocks):

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

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

c. Where full height walls are constructed with concrete hollow blocks, these shall extend up to the bottom of beam or slab unless otherwise indicated on plans. Provide stiffener columns and lintel beams as specified in the

structural drawings or as specified or as deemed required to assure a stabilized wall due to height and other considerations.

2. Sand:

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

3. Mortar:

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

4. Reinforcement

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

5. Plaster bond:

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

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

C. MOISTURE PROTECTION

1. Waterproofing

   Liquid-based waterproofing systems are commonly used to protect surfaces from water infiltration, particularly in construction and building applications. The technical specifications for liquid-based waterproofing can vary depending on the specific product and its intended use. Here are some general technical specifications that you might find in liquid waterproofing products:

   a. Type of Polymer or Material:

      Liquid waterproofing products are often based on polymers such as acrylics, polyurethanes, epoxies, or bitumen. The type of polymer used will affect the product's performance and properties.

   b. Application Method:
      Liquid waterproofing can be applied using various methods, including brush, roller, spray, or trowel. The application method may impact the coverage, thickness, and overall performance of the waterproofing layer.

   c. Coverage:
      The coverage rate is usually specified in square meters or square feet per gallon or liter. It indicates how much area the product can cover at a recommended thickness.

   d. Dry Time:
      The time it takes for the liquid waterproofing to dry and cure is an important factor, especially in construction projects where quick drying is necessary to move on to the next phase.

   e. Thickness:

The recommended thickness of the applied coating is crucial for achieving optimal waterproofing performance. It may be specified in mils, microns, or another unit of measurement.

f. Elongation and Flexibility:
The ability of the waterproofing layer to stretch and flex without cracking is crucial, especially in applications where movement or temperature fluctuations may occur.

2. Vapor Barrier

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

3. Water Stop

Use Bentonite Strip of PVC Water Stop for Construction joint of Retaining Wall. Submit sample for engineer's approval

D. ROOFING WORKS

1. Corrugated galvanized iron (G.I.) sheets, including plain aluminum sheets for roofing accessories shall be cold-rolled meeting ASTM A-153 and with spelter coating of zinc of not less than0.381 kg/sq.m. (1.25 ounce/sq.ft.) conforming to ASTM A-525 or pns 67:1985. Unless otherwise specified or shown on Plans, roofing sheets shall be gauge 26 (0.48mm thick) and provided in long span sizes to minimize end laps. Sheets shall weigh not less than 3.74 kg/sq.m. and shall be marked or stamped showing the gauge, size amount of zinc coating, brand and name of manufacturer. Test specimens shall stand being bent through 180 degrees flat on itself without fracture of the base metal and without flaking of the zinc coating.

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

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

3. The roofing shall be secured to the purlins with min. 2 ½" max. 3" long Tek screws. Provide all-purpose sealant under the fasteners. Ridge rolls, hip rolls and valleys to be used shall be those compatible with the Ga. 24 pre-painted G.I. rib-type roofing sheets. They shall lap the roofing sheets at least 250mm. The ridge rolls, hip rolls and valleys shall be riveted to the roofing sheets.

4. Polycarbonate roofing and sun breakers 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 ½" max. 3" long Tek screws. Provide all-purpose sealant under the fasteners. Ridge rolls, hip rolls and valleys to be used shall be those compatible with the 6mm thick solid polycarbonate sheets. They shall lap the roofing sheets at least 250mm. The ridge rolls, hip rolls and valleys shall be riveted to the roofing sheets.

5. All roofing sheets adjacent to concrete hollow block and other masonry walls such as 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.

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

E. METAL FABRICATION

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.

4. ARCHITECTURAL WORKS

A. FLOOR FINISHES

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

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

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

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

B. WALL FINISHES AND PARTITIONING

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

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

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

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

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

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

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

C. CEILING FINISHES

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

D. CARPENTRY WORKS

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

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

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

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

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

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

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

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

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

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

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

E. PAINTING WORKS

All paints shall meet the required specifications and shall be delivered at the site in the original container. Use non Volatile Organic Compound (V.O.C.) paint or approved by the implementing agency and only accredited painters

of the manufacturer shall execute the work to ensure the true origin and quality of paint and warranty of work.

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

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

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

4. Paint Schedule.

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

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

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

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

    c. Interior Dry Wall

        i. 1 coat primer, 2 coats latex paint finish

    d. Ceiling Boards

        i. 1 coat primer, 2 coats latex paint finish

    e. Slab Soffit

        i. 1 coat primer, 2 coats latex paint finish

    f. Metal / Steel Surfaces

        i. 1 coat primer, 2 coats epoxy enamel finish

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

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

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

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

    In addition, the Contractor shall undertake the following:

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

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

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

d. Allow appropriate ventilation during application and drying period

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

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

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

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

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

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

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

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

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

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

F. HARDWARE

Provide all rough hardware required for the construction of works: nails, straps, lag screws, etc.

1. Butt Hinges: Use Butt Hinges, 3.5" x 3.5" with bearings for panel door

2. Locksets: For PVC Plastic, wood and metal swing doors, use stainless mortise locksets with striker plate.

3. Door Stop: Locate position where no traffic could be obstructed. For restroom doors where tile finish abuts the door swing side, 6" above inside floor finish on door panel.

4. Door Closers: Provide heavy duty door closer for metal doors

G. OTHER FINISHES

1. QC Logo

2. Stainless Steel Signage with neon backlights "GALAS PUBLIC MARKET"

3. 6mm thick facial mirror on 6mm thick marine plywood backing including all incidentals to complete

4. Countertop and backsplash, 200mm thk. Granite Slab Finish (CDS)-CR

5. Bathroom Accessories (tissue holder, towel hook, Liquid Soap Dispenser)

6. PWD Comfort room 50mm dia. Stainless steel Grab bar.

7. Concrete moulding, painted finsish, 20mm

8. Roll-up Door

9. Retractable Bollards

10. Sunbreaker, painted finish

11. Railings, Stainless & Painted

12. Stalls (see plan for details)

H. CLEAN-UP

When the work is completed, the Contractor shall remove all temporary structures and surplus materials of every sort, restore what has been removed before, and leave the premises or site in as good condition as he had originally found them.

5. SANITARY / PLUMBING WORKS

A. GENERAL

DESCRIPTION

i. Applicable provisions of General Conditions govern work under this section.
ii. All fittings, connections and piping embedded in concrete shall be subject to inspection by the Architect and/or his representative before covering and/or completion.
iii. The contractor shall provide all items, articles, materials, operations of methods listed, mentioned or scheduled on the drawings and/or herein, including labor, materials and incidentals necessary and required for their completion.
iv. The contract drawings and specifications are complementary to each other, and any labor or materials called for by either, whether or not called for by both, if necessary, for the successful operation of any of the particular type of equipment furnished and installed will be without additional cost to the owner.
v. Intent: It is not intended that the drawings shall show every pipe fitting.
vi. All such items, whether specifically mentioned or not, or indicated in the drawings shall be furnished and installed, if necessary to complete the system in accordance with the best practice of the plumbing trade and to the satisfaction of the engineer and the owner.
vii. The plumbing contractor is required to refer to all architectural, structural and electrical plans and specifications and shall investigate all possible interferences and conditions affecting his work.

B. SCOPE OF WORK

i. Work included under this section of this specification consists of furnishing all labor, tools and equipment, appliances and materials necessary for complete installation, testing and operation of the plumbing and storm drainage system in accordance with the contract.

a. Arrange for, obtain and bear the cost of necessary permits, bonds and fees, private or government shall be paid by the contractor.
b. Soil, waste and vent pipe system within the building.
c. Sanitary drainage system of the building and its connection to the nearest existing sewer line or drainage line.
d. Storm drainage system and connection to the nearest storm drainage outlets.
e. Cold-water distribution system and supply pipes to fixtures, hose bibs, inclusive of all valves, fittings and other accessories to complete the system.
f. Supply of all plumbing fixtures, trims and accessories.
g. Supply and installation of transfer pumps, booster pumps, elevator pit pump including valves and accessories under the supervision of the pump supplier.
h. Supply and installation of overhead tank, pressure tank and rainwater tank with accessories.
i. The contractor shall provide all necessary shop drawings and two (2) sets of As-Built Plans.
j. Testing for leakage of all water supply and distribution system, drains, waste and venting system plus pressure testing for two (2) hours and disinfection of water distribution system.
k. Water meter and MWSI connection as shown on plans and to be verified at the jobsite.
l. Test run of transfer pumps, booster pump, elevator pit pump, sump pump and sewage pump.
m. Excavation and backfilling in connection with the work shall be included.
n. Furnishing of written one (1) year warranty of the plumbing system

C. SUBMITTALS

a. Within fifteen (15) days after award of contract, the plumbing contractor shall submit for engineer's approval, four (4) copies of all complete list of manufacturer's names of all materials he proposes to use.
b. After approval of the above list and before purchase of any materials, the plumbing contractor shall submit to the engineer for approval, four (4) complete sets of detailed information consisting of manufacturer's bulletins, shop drawings and partial list of materials to be provided under this contract.
c. The plumbing contractor shall assume the loss of and the entire responsibility of any change in the work as shown in the contract drawings, which may be occasioned by approval of materials other than those specified.

D. APPLICABLE CODE AND STANDARD

a. All plumbing works to be done and the sizes of pipes to be used shall be in accordance with the National Plumbing Code and the Plumbing Code of the Philippines.
b. The plumbing contractor shall verify the above paragraphs with each section of the specifications and coordinate his work so that the general contractor will understand clearly the intent of the work to be done.

E. PRODUCTS

a. All materials to be used shall conform to the standards specified. Use of materials shall be governed by other requirements imposed on other

section of these specifications. Materials shall be subject to tests necessary to ascertain their fitness if the engineer so requires.

b. Alternate Materials: Use of any material not specified in these specifications may be allowed, provided such alternate has been approved by the engineer, and provided further, that a test if required shall be done by an approved agency in accordance with generally accepted standards.

c. Identification of Materials: Each length of pipe, fittings, traps, fixtures and devices used in the storm drainage system shall have case, stamped or indelibly marked on it the manufacturer's trademark or name, type and classes of products when so required by the standards mentioned. All materials and equipment mentioned in these specifications, including all incidental items not specifically indicated, but required to complete the contract shall be new and free from defects. If damaged during the course of construction, it shall be repaired or replaced as directed by the Project Manager at no additional cost for the owner.

d. Pipes and Fittings Schedule:

i. Cold Water Lines - Pipe sizes 65mm0 and above shall be galvanized iron pipe Sch. 40 conforming to ASTM A-120-76. Fittings shall be malleable iron, screwed connection. Pipes and fittings with sizes 50mm0 and below Polyethylene or approved equivalent.
ii. Drain, Waste and Vent - shall be unplasticized polyvinyl chloride (uPVC) conforming to ASTM D178 or approved equivalent.
iii. Storm Drainage Lines - Pipe sizes 250mm0 and above shall be reinforced concrete pipe. Pipe sizes 200mm0 and below shall be non-reinforced concrete pipe.

e. Flanges, Bolting and Gaskets and Union

i. Provide flanges at flange connection to equipment and valves, slip-on or threaded as required.
ii. Flanges shall conform to Class 300 'black forged steel welding flanges 1/16" in raised faced to ASTM A-181 Grade 1. Bolts to ASTM A-193 regular hexagonal head unfinished, heavy semi-hexagonal nuts to ASTM A-194. Gasket shall be flat ring or full face or equal.
iii. Provide union at each threaded connection to equipment, and valves for pipe sizes up to two (2) inches in diameter. It shall be galvanized steel pipe Class 300 screwed galvanized malleable iron, ground joint, brass to iron seat.

f. Valves

i. Valves up to and including two (2) inches shall be threaded ends, rough bodies and finished trimmings. Valves 2 ½ inches diameter and larger shall have iron [bodies, brass mounted and shall have either screws or flange ends.
iii. Check valves shall be tested at 150 psi for a period of two (2) hours.
iv. Float valve for cistern tank and fire tank shall be tested at 150 psi for a period of two (2) hours.
v. Foot valve shall be tested at 150psi for a period of two (2) hours.
vi. Water meter shall be positive displacement type. any brand approved by MWSI or LWUA.
vii. Hose Pipes shall be made of male inlet threads, hexagon shoulder and three-quarter inch hose connections. Provide one (1) extra gate valve on the vertical before the hose bib.

g. Drains

i. Floor drains at toilets shall be gauge no. 22 with round strainer and plastic bucket. Pipe size 50mm0 or approved equal.
ii. Deck drain shall be ASA 10-12, pipe size 75mm0 or approved equal.

iii. Floor drain for genset room shall be ASA 40-9F, pipe size 100mm0 or approved equal.
iv. Grating cover (to be supplied by civi l contractor)
v. Area Drain/Catch Basin shall be 140kg/sq. cm. (2000psi) reinforced concrete with GI cutting cover.
vi. Valve box shall be 140 kg/sq. cm. (2000psi) reinforced concrete with pre-cast RC cover.
vii. Site storm drain shall be reinforced concrete for 250mm0 and above, 200mm0 and below shall be concrete pipe.

h. Pipe Sleeves

i. Pipe sleeves shall be installed and properly secured in place at all points where pipes pass through masonry or concrete, except unframed floors on earth.
ii. Pipe sleeves shall be of sufficient diameter to provide approximately one-quarter inch clearance around the pipe.
iii. Pipe sleeve in walls and partitions shall be of wrought iron or steel pipe schedule 40. The pipe sleeves in concrete beams of concrete
iv. Pipe sleeves through floors shall be galvanized steel pipe schedule 40. Sleeve in pipe floor shall extend not less than one (1) inch and not more than two (2) inches above and the space around the pipe shall be packed with fiberglass insulation.
v. Pipe sleeves in footings shall be steel pipe and shall be not less than four (4) inches larger in diameter than the pipe to be installed.

i. Hangers and Supports

i. Vertical run of pipe shall be supported by brace. Horizontal runs of pipe shall be supported by loop 4-sway hanger.

k. Equipment and Pumps Specifications

i. Overhead Water Tank: Stainless steel construction, 1/4" thk with a capacity of 2000 gallons. complete with inlet port, outlet port, drain rung, saddle strap, inlet port, and manhole cover. Refer to Equipment Schedule Plumbing plan.
ii. Elevator Pit Pump: Submersible type, stainless steel construction. Pump shall have a capacity of 26.42 gpm vs 20 ft and driven by 560W, 230V, 1 phase, 60hz submersible motor. Complete with high quality float switches. Refer to Equipment Schedule Plumbing plan.
iii. Sump Pump: Submersible type, stainless steel construction. Pump shall have a capacity of 40 gpm vs 40 ft and driven by 7 46W, 230V, 1 phase, 60hz. Complete with high quality float switches. Refer to Equipment Schedule Plumbing plan.
iv. Sewage Pump :Submersible type, non-clog, designed to pump waste water. Pump shall have a capacity of 90 gpm vs 40 ft and driven by 2.2kW, 220V, 1 phase, 60hz. Complete with float switches. Refer to Equipment Schedule Plumbing plan.
v. Rainwater Collector Tank : Rainwater Collector tanks shall be at 2,000 liters' capacity with complete inlet and outlet ports, drain ports, vent and manholes. Refer to Equipment Schedule Plumbing plan.
vi. Cyclone Filter and First Flush Diverter 50L
vii. Pumps shall operate alternately and/or simultaneously.

l. Plumbing Fixtures and Accessories

i. Water closet shall be flush tank type toilet. vitreous china, elongated siphon jet bowl with bottom outlet and extended rear shelf, 38 mm top spud for quiet. Color is white.
ii. Water closet shall be flush valve toilet. Vitreous china, elongated siphon jet bowl with bottom outlet and extended rear shelf, 38 mm top spud for quiet, exposed closet flush valve, closed sides trap way, box rim design. Color is white.

iii. Lavatory shall be vitreous china, self-priming with front overflow or approved equal. Color is white.
iv. Urinal shall be wall-hung, vitreous china with extended shields, integral trap and 19-mm inlet spud or approved equal: Color white.

m. EXECUTION

i. Piping Installation: Piping shall be installed as shown on the drawings, as recommended by the manufacturer and as directed during installation, straight and direct as possible, forming right angles or parallel lines with building walls and other pipes and neatly spaced. Erect pipe risers plumb and true, parallel with walls and other pipes neatly spaced. All piping shall be supported or suspended on stands, clamps, hangers or equivalent or approved design. Supports shall be installed in such a manner to permit pipe free expansion and contraction while minimizing vibration.
ii. Plumbing System Test: The entire system of drains, waste and vent shall be tested. Water test shall be in accordance with the plumbing Code. Every portion of the system shall be tested to a hydrostatic pressure equivalent to at least 10-foot head water for a period of ½ hour before covering. All cold-water lines shall be tested at 150 psi for a period of two (2) hours before covering. Defects disclosed by the test shall be repaired with new materials at the expense of the contractor.

n. Fixture Installation

i. Support all fixtures securely in a neat workman-like manner on approved carriers and supports. The method of support for each fixture shall be approved type manufacturer's standard, except where fixture designations on the drawings indicate modifications. Install all fixtures level and flush with finish floors and partitions. All fixtures shall be provided with individual shut-off valve and equipped with a trap.

6. ELECTRICAL WORKS

a. WORK INCLUDED

viii. The work to be done under this Division comprises the furnishing of all tools, labor,
equipment, fixtures and materials, unless otherwise herein specified, required to complete
and leave ready for use the electrical system in accordance with this specification and
accompanying drawings of materials and finishes.

ix. The electrical contractor shall coordinate his work so that the general contractor and all
other subcontractors will understand clearly the work to be done. The electrical contractor
shall finish all electrical facilities and provision necessary for the installations and
operations of other trades such as mechanical, air-conditioning, plumbing, sanitary and
others.

x. All contractors and all companies or persons providing labor, materials or both for this project, are specifically referred to the General Conditions of

the specifications, to the general contract plans, to all Divisions of specifications and to the various other contract documents, which may affect the completion of the contract work.

b. CODES, INSPECTIONS, PERMITS AND FEES

i. The work under this contract shall be done according to the requirements of the latest edition of the Philippine Electrical Code, the rules and regulations of the Local Government Authorities of Quezon City and the requirements of Manila Electric Company. Nothing contained in this specification or shown on the drawings shall be construed as conflict with national and local ordinances or laws governing the installation of Electrical Works, and all such laws and ordinances are hereby made part of these specifications. The contractor is required to meet the requirements hereof.

ii. All permits and electrical fees required for this work shall be obtained at the expense of the Contractor. The Contractor shall furnish the Architect or the Owner or the same maybe, a final certificate of electrical inspection and approval from the proper government authorities after completion of the work.

c. MEASUREMENTS

i. The Electrical Contractor shall procure from the Architect detailed drawings of those parts of the work not fully shown on the plans and he shall compare and verify with the Owner. Any lack of agreement shall be submitted at once to the Architect for adjustments.

d. SLEEVES AND FORMS FOR OPENINGS

i. The Electrical Contractor shall provide and places all sleeves, for piping penetrating floors, walls, partitions, etc. He shall locate all necessary slots and openings for his work and it shall be done at such time as not to delay the general contractor of the project.

e. LOCATION OF OUTLETS

i. All Outlets shall be truly centered in panels and spaces provided thereof. Any discrepancy
in the outlet location between the electrical plan and architectural plans shall be submitted
to the Architect at once, to be verified before outlets are installed.

f. GROUNDINGS

i. All Outlets shall be truly centered in panels and spaces provided thereof. Any discrepancy
in the outlet location between the electrical plan and architectural plans shall be submitted
to the Architect at once, to be verified before outlets are installed.

ii. All ground connections shall have clean outlet surfaces and shall be tinned and sealed
while bolting. Unless otherwise specified, ground wire shall be installed in exposed
conduits and connections made readily accessible for inspection. Connection shall not be
made underground or concealed in floors or walls.

g. WIRING METHODS

i. All Outlets shall be truly centered in panels and spaces provided thereof. Any discrepancy in the outlet location between the electrical plan and architectural plans shall be submitted to the Architect at once, to be verified before outlets are installed.

ii. All wiring shall in general be installed inside standard conduits. All conduits shall run
embedded in concrete, underground but in concrete envelope, embedded in hollow
blocks partition, concrete slab, walls and roof above, between double wall wooden partitions if any, where the installation of concealed and/or embedded conduit wiring may be used, but only upon approval of the Owner's authorities concerned. Exposed conduits
shall be Intermediate Metal Conduits unless otherwise specified.

h. GUARANTEE

i. The Electrical Contractor shall guarantee his work for a period of one (1) year from the date of final acceptance by the owner except for particulars items specifically mentioned
in these specifications.
ii. The Electrical Contractor shall, without additional compensation for the period specified, replace any work materials or equipment furnished and installed by him under this contract, which develop defects except from ordinary wear and tear.

i. MATERIALS

i. All materials shall be new and shall conform to the standards of Underwriter's Laboratories, Inc.
ii. All materials on all systems shall comply with the following specifications unless specified and all materials not specified shall be of the best of their respective kind.
iii. Materials sample shall be submitted for approval as required by the Architect and Electrical Engineer.

j. WIRES

i. All wires shall be copper, soft drawn and annealed, shall be 98% conductivity or better, shall be smooth and true of a cylindrical form and shall be within the actual size called for.
ii. All wires and cables shall comply with the requirements of the Underwriter's Laboratories Inc., the ASTM and the IPCEA as to their particular usage.
iii. Wires and cables for outdoor and indoor lighting and power system shall be moisture and Heat Resistant Thermoplastic insulated for 600volts working pressure type THHN unless otherwise noted on the plans or specified.
iv. For lighting and power system, no wire smaller than 3.5mm2 shall be used except for control leads/ grounding wire.
v. All wires and cables shall be manufactured by a reliable manufacturing company acceptable to the Electrical Engineer of the owner.

k. CONDUITS

i. The conduit system shall consist of the following Intermediate Metal Conduit (IMC) & Electrical Metallic Tubing (EMT) They shall be of standard sizes and weight, mild steel hot dipped galvanized with inside enamel or epoxy coating, and acceptable to the Electrical Engineer of the Owner. Polvinyl

Chloride Conduit (PVC) They shall be of standard size and weight, made of polyvinyl chloride, extruded, heavy wall, rated for 90-degree centigrade cable, schedule 40, pipes or approved equal pipes. Limitations of use shall be as follows:

a. As per requirement of the latest edition of PEC and/or NEC.

b. Not permitted where subject to mechanical damage.

ii. All conduits shall be of true cylindrical form and shall be within the actual size called for.
iii. No conduits shall be used in any system smaller than 15-mm electrical trade size, not shall have more than four 90 degrees' bend in any one run, and where necessary, hand hole and pull boxes shall be provided.
iv. No wires shall be pulled in any conduit until the conduit system is complete in all details, in case of underground work, until concrete envelope or masonry has been completed in every detail. In case of concealed work, until rough plastering has been completed.
v. The ends of all conduits shall be tightly plugged to exclude plaster dust sand and soil including moisture while the renovation of the perimeter is in the process.

l. OUTLETS BOXES AND FITTINGS

i. At all outlets of every kind, for all systems, there shall be provided a suitable fitting which shall be either a box or other device especially designed to receive the type of fitting to be mounted thereon.
ii. The Contractor shall consult with the Electrical Engineer as to the nature of various fitting to be used before installing his outlet fittings and shall conform strictly in the use of fittings so that the work when completed will be finished design.
iii. In case of lamp post, the outlet of fittings shall be provided with suitable fixtures supports or a support of a size and a kind required by the fixture to be erected.

m. SWITCHES

i. Local lighting switches shall be flush type, heavy duty, 15- ampere size 250 volts, bakelite case, quick connect terminal Outdoor lights shall be automatically operated by means of photo switch and manual selection. Or it might be a manual switch by means of breaker switch inside the lighting panel.

n. RECEPTACLES

i. Standard receptacles shall be 15- ampere size 250volts, parallel slots, duplex, flush mounted composition case, side wired with the insulated mounting yoke. If weatherproof wall plate is required, standard factory made metal waterproof plate.

o. PLATES

i. All switches and receptacles plates shall be bakelite plastic, ivory-colored or as directed by the Architect.

p. SWITCH GEAR, PANEL BOARDS AND CABINETS

i. Panel boards for outdoor lightings shall conform as indicated in the drawings with respect to supply characteristics, rating of main lug or main circuit breaker, main magnetic contactor, number and sizes of branch circuit breakers. All should have factory-wired control wirings with terminal block connection for external leads.
ii. Lighting and power panel board either wall mounted or free standing shall consist of a factory complete dead front assembly of back plan, main busses, overcurrent and switching units, sheet metal cabinet and trim. Cabinet shall be fabricated from code gauge galvanized sheet metal with cover capped and fastened.
iii. Panel boards and trim shall be suitable for the type of mounting shown on the drawings. The inside and outside of the panel boards cabinet and trim shall be factory painted and having two (2) coats of rust proof prime coat and one finish shop of gray enamel paint.
iv. All cabinets and enclosure shall be general purpose, NEMA type 1 for indoor installation. Except where specifically noted on plans for outdoor use shall be rain tight and dust type NEMA 4X type enclosure.
v. All circuit breakers with frame size above 100AT shall have minimum interrupting capacity of 22 KAIC at 240 volts and frame size 100AT and below shall have minimum interrupting capacity of 18 KAIC at 240 volts. All circuit breakers shall be molded case, bolt on type with thermal magnetic trip elements. Number of poles, trip coil rating and frame size shall be as indicated on plans.
vi. Switchgear main circuit breaker shall be stationary type, programmable trip device, an electronic relay that employs microprocessors-based technology. Functions to overload protection, short circuit protection, with selectivity, instantaneous short circuit protection with adjustment and ground fault protection.
vii. Cardholder on inside of door with clear plastic cover and complete typewritten schedule of panel branch circuit shall be provided. Leave spare circuit blank.
viii. Local panel boards and switchgear manufacture shall include among others,
ix. Submit samples and or product description of panel board to be used for approval prior to ordering and installation.

q. ELECTRIC SERVICE

i. The electric service shall be three (3)-phase, 3-wires+ 1-ground wire, 220volts, 60 hertz. The sizes of service entrance conductor and conduit are shown in the plans.
ii. The electrical contractor shall inspect the site, consult with MERALCO and check the orientation of the proposed service entrance before commencing work to avoid field problems.

r. LIGHTING SYSTEM

i. The lighting system shall be complete in every respect as indicated on the electrical plans or as specified in the Architectural plans. Exact fixture location shall be determined.
ii. All wiring shall be installed in conduits, and in general shall be concealed. Buried underground in concrete encasement and/or embedded in concrete.
iii. Mounting height of devices shall be as indicated in the plans and/or subject to Architect's approval prior to installations as follows Local switches - Receptacles 1.4 above finish floor line 0.3 above finish floor line

s. DISTRIBUTION FEEDERS

i. Distribution voltage shall be 220volts, three (3)-phase, 4 wire. Feeder conductors and raceway shall be installed as shown on drawings and no change in size shall be made without the written consent of the Architect. Feeder conductors shall be continuous, and without splices between terminals. When feeders are run in multiple, they shall be exactly of the same length to avoid unbalanced division of the current.

t. CONNECTORS AND INSULATION

i. Use solderless mechanical pressure type lugs, copper connectors for splicing wires greater than no 8mm.sq. All splices shall be properly insulated using rubber tape and plastic electrical tape. Application of tapes shall be equivalent to the insulation of wire concerned, edges to provide smooth surfaces before taping.

u. BRANCH CIRCUITS

i. The drawings indicate the general methods of installation of all circuit wirings and the power lighting outlets which are to be supplied from this circuit. Branch circuit raceways shall be run from outlets to panel boards as direct as the ground and level condition will allow. Circuit allocations shall be as indicated on the drawings. Where it becomes necessary to connect any outlet to the circuit other than the one shown on the drawings, this shall be done without extra charge and only upon written consent of the Architect. No wire smaller than 3.5mm sq. shall be used for any lighting or power branch circuit. All lighting outlet shall be supplied from 2-wire single phase circuits. Number of wires for other outlets shall be as indicated on the drawings.

v. MOTOR CONNECTIONS

i. Connect the motor starting devices for all motors, except were otherwise specifically provided for under other contracts. Furnish all necessary connections between controllers and motors in conduit, and leave motor ready to start. The power supply leads to the motor from the controller shall be the same as the feeder indicated on the drawings, except for six terminal lead motor where wye-delta starting method is being applied.
ii. Other trades, i.e. mechanical contractor, except as otherwise noted or specified will supply and deliver all controllers and shall erect and connect up safe complete.
iii. The Electrical Contractor or trade people shall be held responsible as far as power supply to the controller is concerned. He shall ascertain the exact location of the motor controller and motors from other trades before installing the circuit work.

w. RECORD DRAWINGS AND AS BUILT PLANS

i. The Electrical Contractor shall keep an active record of the actual installation works during the progress job. These shall become the reference for the preparation of the As Built Plans which shall include all pertinent information, complete in all aspects of the actual installations, all new information not originally shown in the contract drawings. The As-Built Plans shall be prepared by the Electrical Contractor at his expense and shall be submitted to the Architect and the Engineer for approval upon the completion of the work. The approval of the As-Built drawings shall be a pre-requisite for the final acceptance of the electrical works.
ii. Two (2) copies of the As-Built drawings, signed and sealed by the Electrical Contractor's Professional Electrical Engineer, shall be submitted to the

Architect and Engineer consultants. Original tracing/ reproducible copy shall also be submitted.

7. AUXILIARY WORKS

a. WORK INCLUDED

iii. The work to be done under this Auxiliary System comprises the furnishing of all tools, materials, labor & installation of equipment, unless otherwise herein specified, required to complete and leave ready for use the Fire Detection and Alarm System, Closed Circuit Television (CCTV) System, Voice and Data System, Public Address System and Parking Management System in accordance with this specification and accompanying drawings.

iv. The contractor for the electronic works (auxiliary systems Contractor) shall coordinate his work so that the general contractor and all other subcontractors will understand clearly the work to be done.

v. All contractors and all companies or persons providing labor, materials or both for this project, are specifically referred to the General Conditions of the specifications, to the general contract plans, to all Divisions of specifications and to the various other contract documents, which may affect the completion of the contract work.

b. CODES, INSPECTIONS, PERMITS AND FEES

vi. The work under this contract shall be done according to the requirements of the latest edition of the Philippine Electronics Code, the rules and regulations of the Local Government Authorities of Quezon City and the requirements of the telecommunications service provider. Nothing contained in this specification or shown on the drawings shall be construed as conflict with national and local ordinances or laws governing the installation of Electronic Works, and all such laws and ordinances are hereby made part of these specifications. The contractor is required to meet the requirements hereof. All permits and fees required for this work shall be obtained at the expense of the auxiliary system Contractor. The auxiliary system Contractor shall furnish to the Architect/Engineer or the Owner or the same maybe, a final certificate of electronic inspection and approval from the proper government authorities after completion of the work.

c. TEST

vii. The auxiliary system Contractor shall test all installed systems, replace or remedy all defective works and adjust such system as needed or as the Architect or the Owner shall direct. He shall also conduct meetings with the technical people selected by the Owner, and properly discuss the proper operation and maintenance of all auxiliary system installed.

d. MEASUREMENTS

viii. The auxiliary systems Contractor shall procure from the Architect/Engineer detailed drawings of those parts of the work not fully shown on the plans and he shall compare and verify with the Owner. Any lack of agreement shall be submitted at once to the Architect/Engineer for adjustments.

e. SLEEVES AND FORMS FOR OPENINGS

ix. The auxiliary systems Contractor shall provide and places all sleeves, for piping penetrating floors, walls, partitions, etc. He shall locate all necessary slots and openings for his work and it shall be done at such time as not to delay the general contractor of the project.

f. LOCATION OF DATA OUTLETS, CAMERAS AND ALARM BELLS

x. All data outlets shall be truly centered in panels and spaces provided thereof. Any discrepancy in the location of an outlet and security camera between the electronics plans and architectural plans shall be submitted to the Architect/Engineer at once and verify before such are installed.

g. GROUNDINGS

xi. All metallic conduits, cable trays, supports, cable ladder, metallic cabinets, metallic enclosures/racks and all electronic equipment shall be property grounded by means of AWG #6 copper wire that is bonded to the building's Electrical grounding system or other means prescribed by EIA- 607. Special attention should be given to independent grounding of each auxiliary system to eliminate EMC and EMI problems.

h. WIRING METHODS

xii. All wiring shall in general be installed inside standard conduits. All conduits that runs thru or embedded in concrete; underground but in concrete envelope, embedded in hollow blocks partition, concrete slab, walls and roof above, between double wall wooden partitions if any, PVC conduit can be used. Where the installation of concealed and/or embedded conduit wiring may be used, but only upon approval of the Owner's authorities concerned. Exposed conduits shall be Intermediate Metal Conduit (IMC) unless otherwise specified.

xiii. In Voice and Data System, cable trays and ladders may be used as a requirement for structured cabling system as prescribed by EIA- 569. Patch guide is also used for orderly cord storage inserted just above and beneath on modular patch panel (MPP) frame, at the front side. Patch guides allow an orderly arrangement of patch cords. Marking/ labeling all the different component for easy identification and maintenance is a must.

xiv. Proper guidelines for cabling administration shall be strictly provided: cabling plan, numbering & labeling scheme, location of cabinets and distribution boxes. Respect the maximum drive distances between th equipment racks and telecom outlet: for UTP Cat6 is 120 meters, while 3,000 meters for fiber- optic cables.

xv. As per requirement set by the Bureau of Fire Protection (BFP) and also per recommendation of the Fire Code of the Philippines, Intermediate Metal Conduit (IMC) conduit shall be used for the entire installation of Fire Alarm System in buildings, except Electrical Metallic Tubing (EMT) conduit may be provided in dry locations not enclosed in concrete or where not subject to mechanical damage.

xvi. *Strictly maintain uniform cable geometry all through wiring schemes.*

i. GUARANTEE

xvii. The auxiliary system Contractor shall guarantee his work for a period of one (1) year from the date of final acceptance by the owner except for particular items specifically mentioned in these specifications.

xviii. The auxiliary system Contractor shall, without additional compensation for the period specified, replace any work materials or equipment furnished and installed by him under this contract, which develop defects except from ordinary wear and tear.

j. MATERIALS

xix. All materials to be installed shall be brand new. All the materials shall conform to the standards set by Underwriter's Laboratories, Inc. (UL).

xx. All materials to be installed for the auxiliary system shall comply with the following specifications, and for those materials which are not directly specified shall be of the best of their respective kind.

xxi. Samples on all materials to be installed shall be submitted to the Architect/Engineer for approval.

k. WIRES / CABLES

xxii. All wires and cables shall comply with the requirements of the Underwriter's Laboratories, Inc (UL), the ASTM, the IPCEA as to their particular usage, and the cabling/ wiring requirement set by EIA- 568A.

xxiii. All thermoplastic fixture (TF) to be used shall be copper, soft- drawn and annealed, shall be 98% conductivity or better, shall be smooth and true of a cylindrical form and shall be within the actual size called for.

xxiv. For the CCTV and Security System, to power- up all the security cameras, captured video shall be transmitted and recorded to the network video recorder (NVR) using CAT6 UTP cable.

xxv. Category 6 (CAT6) UTP cable for horizontal cabling shall be used for the entire Data System. For safety reasons, the fiber- optic cable should be low smoke halogen free and flame retardant. The UTP cable shall be UL approved and should be able to run applications up to 1000 MHz. UTP cables and fiber- optic cables manufactured by a reliable manufacturing company acceptable to the Engineer or the Owner.

xxvi. Fire Alarm System Thermoplastic fixture (TF) copper wire shall be used for the wiring connections of Class A wiring communication shall be provided.

xxvii. All copper wires (TF wire) shall be manufactured or any approved equal brand manufactured by a reliable manufacturing company acceptable to the Engineer or the Owner.

l. CONDUITS

xxviii. The conduit system shall consist of the following: Electrical Metallic Tubing (EMT) Conduit shall be of standard size and weight, mild steel hot dipped galvanized with inside enamel or epoxy coating, approved brand equal and acceptable to the Engineer or the Owner. Polyvinyl Chloride Conduit (PVC) Conduit shall be of standard size and weight, made of polyvinyl chloride, extruded, heavy wall, rated for 90-degree centigrade cable, schedule 40 and acceptable to the Engineer or the Owner.

xxix. All conduits shall be of true cylindrical form and shall be within the actual size called for.

xxx. No conduits shall be used in any system smaller than 15-mm electrical trade size, shall not have more than four 90 degrees' bend in any one run, and where necessary, hand hole and pull boxes shall be provided.

xxxi. No wires shall be pulled in any conduit until the conduit system is complete in all details, in case of underground work, until concrete envelope or masonry has been completed in every detail. In case of concealed work, until rough plastering has been completed.

xxxii. The ends of all conduits shall be tightly plugged to exclude plaster dust sand and soil including moisture while other works in the perimeter is in process.

m. TELECOM OUTLET BOXES AND FITTINGS

xxxiii. LAN outlet is the interface between horizontal cabling and the modular line cord connecting to the computer/ telephone terminal. The eight (8)-position modular UTP telecom outlet and its pin assignments shall meet EIA-568 standards. All voice/ data outlets should be RJ45 type, ISO compliant, Insulation Displacement Contact, modular for RJ45 connector universal application and multi- vendor supportive.

xxxiv. Use a modular line cord (patch cord) with L < 3m to connect the telecom outlet to a workstation. Patch cord is a flexible piece of cable terminated at both ends with plugs. Patch cords shall connect either the ports of active equipment on patch panel or the workstations to the wall outlet at the workplace. Twisted pair patch cord RJ45/ RJ45 shall be very high-speed multimedia patch cords. Patch cord gray (G) will be installed from telecom outlet to workstation, while patch cord blue (B) will be installed from modular patch panel (MPP) to hub.

xxxv. At all data outlets of every kind, for all auxiliary systems, there shall be provided suitable fittings which shall be either a box or other device especially designed to receive the type of fitting to be mounted thereon.

xxxvi. The auxiliary systems Contractor shall consult with the Engineer as to the nature of various fittings to be used before installing the outlet fittings and shall conform strictly in the use of fittings so that the wire when completed will be finished design.

n. ELECTRONIC COMPONENTS & EQUIPMENT

xxxvii. Underwriter's Laboratories Inc. (UL) approved by the Factory Mutual System. It should be furnished by a single supplier/ manufacturer (one brand) only who are regularly engaged in the production/supply of such component/equipment, to achieve devices compatibility and for a reliable CCTV and Security system. All electronics equipment shall be state of the art and shall be only solid state component, and must be suitable for the purpose intended.

xxxviii. PoE Switch All security cameras should be Power over Ethernet (PoE) supplied using a 24- port UTP 10/100/1000 Managed Ethernet injector.

xxxix. CCTV Camera All security cameras installed outdoors shall be Compact Bullet Smart IP Camera with watertight housing (IP 66), while those installed indoors shall be 2MP Smart IP Indoor- Dome Camera. Both cameras shall use 1/2.8" progressive scan CMOS as image sensor, with a minimum effective pixel of 2.0 MP, maximum IR range of 30m and at least 120 dB WDR.

xl. Network Video Recorder (NVR) NVR supports H.264/H.264+/MPEG4 video formats, can handle up to 32 IP cameras, recording at up to 12MP resolution and has up to 8 SATA interfaces and 1 eSATA interface connectable for recording and backup.

xli. LED Monitor/Display The monitor should be CCTV- graded, with LED BL panel better than 32", supports NTSC/ PAL signal system, with a minimum resolution of 1920 x 1080 Full HD, and supports 2 x BNC, VGA, DVI & HDMI at input/ output. It shall require an AC input of 100 - 240Vac and consumes a power of at least 24W. It shall have a high- end video processor, PIP control function and automatic color control and color adjustment.

xlii. All Telephone (Voice) and Data System electronic devices/components and equipment shall be listed by Underwriter's Laboratories Inc. (UL), or approved by the Factory Mutual System. It should be furnished by a single supplier/ manufacturer (one- brand) only who are regularly engaged in the production/supply of such component/equipment, to achieve devices compatibility and for a reliable voice and data system. The specifications are intended to provide a broad outline of the required voice and data system, but are not intended to include all details of design and construction.

xiii. Cabinets/ Rack Enclosures Cabinets are the basis for housing all cabling system components. The cabinets shall be fully equipped with internal frames for patch panel, active equipment (cross- connect hardware), connection modules, and to organize the cable and patch cord lay out. Typically, a standard 19" framing and paneling shall be used provided by proper climate control or ventilation. Cabinets should be in a room that is environmentally suitable, climate controlled and that can be secured. All cabinets should have locks or intrusion detection to safeguard the network infrastructure.

xiv. IDC Frame Insulation displacement contact (IDC) frame shall have sufficient space for overvoltage protection, front side connections for easy installation, one single insertion tool for all connections. The front panel covers all underlying modules and cabling for a homogenous appearance and orderly installation.

xiv. All Fire Alarm electronic devices/components and shall be listed by Underwriter's Laboratories Inc. (UL), or approved by the Factory Mutual System. It should be furnished by a single supplier/ manufacturer (one-brand) only who are regularly engaged in the production/supply of such component/equipment, to achieve devices compatibility and for a reliable fire detection and alarm system. Provide a complete, manual fire alarm system. The actuation of any manual station or shall cause: building alarm devices to sound.

xivi. DC Power Supply Obtain a power input of 240Vac from emergency support panel, transformed and rectified to 24V DC output. This DC supply is enough for operation of initiating, alarm signal, trouble signal, and tripping circuits.

xivii. Battery Back- up This is provided for FDAS operation in the event of primary power source failure. Transfer from normal to auxiliary power shall be done automatically. The rechargeable batteries shall have a sufficient ampere-hour rating to operate the system under supervisory and troubled conditions, including audible trouble signal devices for 60 hours and audio visual signal devices under alarm conditions for an additional 5 minutes. Provide a solid- state automatic battery charger capable of recharging a completely discharged batteries to fully charged condition in 48- hours or less.

xiviii. Manual Pull Station It contains electronics that communicate the station's status (alarm, normal) to the transponder over two wires which also provide power to the pull station. Stations shall be flush mounted.

xiix. Audiovisual Alarms Provide surface mounted approved audiovisual alarm devices consisting of a single vibrating type alarm horn/bell suitable for use in an electronically- supervised circuit and top- mounted integral flashing strobe light. Horn/bell shall have a sound rating of at least 90 dB at 3m. Strobe light shall have a ruby colored lens and shall pulse in march- time sequence. Occupancy Sensors IP Based Ultrasonic sensor installed on single space. Uses ultrasonic signal to detect the presence of the object. Sensor lamp is ON when parking space is vacant, whereas lamp is OFF when parked. IP65 Outdoor rating.

l. LED Indicator Displayed as green for vacancy, red for full parking. Super bright RGB LED bulb can change any time to reserve spaces for special user groups.

li. LCD Signage Occupancy Counts Real time information feed-back of parking and vacancy status of each floor at the parking lot. The status of vacancy number, emptiness, crowded, full parking is available by the high brightness.

o. RECORD DRAWINGS AND AS BUILT PLANS

lii. The auxiliary system Contractor shall keep an active record of the actual installation works during the progress job. The said records shall become the reference for the preparation of the As-Built Plans which shall include all

pertinent information, complete in all aspects of the actual installations, all new information not originally shown in the contract drawings. The As Built Plans shall be prepared by the auxiliary system Contractor at his expense and shall be submitted to the Architect and the Engineer for approval upon the completion of the work. The approval of the As-Built drawings shall be a pre-requisite for the final acceptance of the electronic works. Two (2) copies of the As-Built drawings, signed and sealed by the auxiliary system Contractor's Professional Electronics Engineer, shall be submitted to the Architect and Engineer consultants. Original tracing/ reproducible copy shall also be submitted

8. FIRE PROTECTION, AUTOMATIC, WET-PIPE TYPE SPECIFICATIONS

A. GENERAL

Applicable provisions of the "General Conditions" govern work under this section.

B. QUALIFICATIONS OF CONTRACTORS

The Contractor for the fire protection installation shall be a qualified Fire Protection Contractor, regularly engaged in the installation of automatic fire sprinkler systems and other fire protection equipment, and must have at least one (1) sprinkler installation approved by the Philippine Insurance Rating Association (PIRA). Companies or corporations whose personnel have supervised an approved sprinkler plan and subsequently approved by PIRA or by the Fire Department are also qualified.

C. SCOPE OF WORK

1. This specification includes the furnishing of all labor, materials, equipment and services necessary or incidental to the complete installation, testing, adjusting and placing into service of the several systems of fire protection, all as shown on the drawings and as hereinafter specified. Drawings and specifications are considered as mutually explanatory and all works called for by one and not the other, shall be performed as though called for by both. In cases of conflicting information, the Architect and Engineer shall be notified at once in writing. Where incidental equipment or appurtenances are required and not listed as shown, same shall be furnished as required for a complete fire protection system.

2. Drawings are intended to show general arrangement and approximate physical sizes of equipment diagrammatically. Every bolt, nut, brace, strut, etc., is not necessarily indicated or specified; all such items as may be required, necessary or incidental to the proper and dependable operation of each system being a requirement of this contract, whether specifically referred to or not, must be supplied.

3.Work included in this specification shall consist of, but not limited to the following items:

i. Arrange for, obtain and bear the cost of necessary permits, bonds and fees for the automatic sprinkler work.

ii. All fees, private or government shall be paid by the Contractor.

iii. Fire hose cabinets and fire hose accessories, including connection pipe and fittings to the sprinkler system.

iv. Furnish and install fire department connection for the wet system.

v. Do the testing of all piping works and necessary cleaning of the fire protection works. This includes also the testing of the fire department pipeline and drain pipe and water flow alarms.

vi. Fire extinguishers as shown in the plans shall be supplied and installed by the Contractor. Over and above those specified, the owner of the building shall supply the requirements of the Fire Department.

vii. All openings through which fire may spread from one floor to the other, such holes through floors or walls for the pipe shall be sealed with fire resistant materials.

viii. Furnish the shop drawings and certificates of inspection.

ix. Periodically remove from the jobsite all rubbish and debris resulting from the fire protection work.

x. Furnish and install one (1) unit of 10 lbs. (HCFC) portable fire extinguishers for Electrical Rooms, Pump Rooms.

xi. Miscellaneous items as hereinafter provided.

D. SITE CONDITION

The Contractor shall be deemed to have visited the site and acquaint himself with the existing site condition, means of access and take into account any feature that may affect his tender. No claim for his neglect to do so or not, out of a misunderstanding on his part in these conditions shall be entertained.

The Fire Protection Contractor shall be responsible for the proper coordination with other trade contractors.

E. STANDARDS, CODES AND REGULATIONS

The applicable current standards for the fire protection systems shall be the National Fire Protection Association (NFPA), NFPA-13, and Philippine Fire Code-PD 1185, the PSME Code and all other applicable local codes and ordinances.

F. SUBMITTAL (SHOP) DRAWINGS AND DATA

i. Before commencing any work or providing any materials at the jobsite for this project, the Fire Protection Contractor shall submit to the Engineer for approval, four (4) copies of catalogue cuts and descriptive matter regarding materials and equipment which he intends to furnish and install.

ii. Shop drawings and data shall be submitted specifically for, but not limited to the following
items: calves, pipes, pipe hangers, hose valves and accessories, Fire Department connections, fire pumps and, controllers, fire hose cabinets, mechanical grooved coupling, flexible pipe connectors, pressure reducing valves , pipe riser support and sleeves, portable fire extinguishers and foam equipment.

iii. The Fire Protection Contractor shall not proceed with the installation of the work until he has received the Engineer's approval on his shop drawings.

iv. The Engineer's approval of shop drawings, catalogue cuts, etc. shall not relieve the Fire Protection Contractor of the responsibility for any errors or omissions which may exist in the items neither submitted nor shall relieve him from the responsibility for deviations from the contract drawings and specifications.

The stamped approval of the shop drawings, catalogue cuts , etc. shall not be construed as a complete check, but will indicate only that the general design and method of construction is satisfactory.

v. In the event inspection authorities require additional clarifying details, the details shall be prepared and approval of the same secured by the Fire Protection Contractor at his expense.

G. CONDUCT OF WORK

The Fire Protection Contractor shall employ on the job at all times a competent superintendent Licensed Mechanical Engineer who shall be responsible for the progress and execution of the work. Workmanship shall be of high quality, conforming to standard practice as stipulated by NFPA, ASTM and ASA and PSME recommendations by skilled workmen during regular working hours.

H. LOCAL AND IMPORTED MATERIALS

All materials and equipment furnished under this section shall be new, manufactured in the United States, and Non-UL/FM but conforming to NFPA Standards

The proposal submitted shall include all materials and equipment as specified or shown on the drawings.

I. STANDPIPE SYSTEM

i. Pipe shall be new, designed for 175psi working pressure, conforming to ASTM specifications, manufactured in the United States or approved local pipes and have the manufacturer's name or brand along with the applicable ASTM standard marked on each length of the pipe. The locally manufactured pipe brand "Supreme" are acceptable brand with proper schedule and wall thickness.

ii. Pipe shall be steel, schedule 40, black and in accordance with the specifications ASTM A120 or A53.

iii. Schedule 40 black steel pipes shall be joined by screwed joints in accordance with specifications ANSIB2.1 up to 2½" and flanged, Victaulic type or screwed connections for 3" and up. Pipe fittings to be used with schedule 80 pipes shall be rated 300lbs. Class if there are any.

iv. Sprinklers' piping that is exposed to the weather or used in a corrosive atmosphere shall be painted with protective coating. Sprinkler piping in the building shall be painted with two (2) coats of enamel primer and two (2) coats of Fire Red color enamel paint.

v. Screwed fitting shall be malleable iron, 300 lbs. and 150 lbs. class, black and in accordance with ANSI B16.3. "Victaulic" brand mechanical tee and elbow UL/Fm fittings can also be used.

vi. Flanged fittings shall be steel, short body, 150, black and in accordance with ANSI B16.1. Gaskets shall be full face of 1/8" minimum thickness red sheet rubber. Flange bolts shall be hexagon head machine bolts with semi-finished hexagon head nuts, cadmium-plated having dimension in accordance with ANSI B18.2.

vii. Weld fittings shall be steel, standard weight, black and in accordance with ANSI B 16.9, ANSI B16.25, ASTM A234, ANSI B16.5 or ANSI B16.11.

viii. Outside screw and yoke (O.S. & Y) gate valves shall be flanged , iron body, bronze mounted, 175 psi working pressure, with hand wheel turning counterclockwise to open. Valve shall be tested and listed by UL and/or FM .

ix. Valve for main riser drain shall be angle type or globe type, bronze body, screwed, 175 psi working pressure rating, 2" size and a renewable composition soft disc.

x. Valve for auxiliary drain and inspector's test connection shall be globe type, bronze body, screwed, 175 psi working pressure rating, 1" size and a renewable composition disc.

xi. Flow switch shall be vane type, 24 DC. Flow switch shall be tested and listed by UL and/or FM.

xii. Butterfly valve with tamper switch shall be tested and listed by UL and/or FM.

xiii. Cabinet for fire hose shall be recessed, 16-gauge body, aluminum door trim. Cabinet shall be designed for 100 feet hose pin rack and fire extinguisher. Door shall be full panel glass. Cabinet finish shall be baked white enamel inside with "Fire Red" coat inside. Cabinet may be locally made of approved quality.

xiv Provide 1 ½" spanner to each FHC cabinet.

xv. Furnish and install one (1) each - 10 lbs. capacity HCFC chemical multi-purpose type portable fire extinguisher UL-listed and Factory Mutual approved to each fire hose cabinet.

J. STANDPIPE SYSTEM

i. The interior surfaces of all piping and equipment shall be clean and free of all dirt. Loose scale, rust and other foreign materials before installation.

ii. Pipe ends shall be reamed to remove all burrs and pipe sections shall be cleaned inside to remove all chips and foreign materials prior to making up joints. Approved joint compound shall be applied to the threads of the pipe and not in the fitting when making up joints. Pipe shall not exceed into the waterway of the fitting.

iii. When welding pipe on jobsite, the fire hazard of the welding process shall be with suitable safeguards. Weld in place of pipe and fittings shall not be allowed at the jobsite. Only shop weld fabrication will be permitted with factory made fittings. Mitered weld will not be permitted. Intersection of feed main and cross main pipe shall be provided with flanged or Victaulic type fittings.

iv. Pipe passing through the building walls and floors above grade shall be provided with sleeves of standard weight galvanized steel pipe and shall be installed prior to concreting works of the Civil Contractor. The annular spaces between pipe and sleeves shall be packed tight with insulation fire resistant materials. Provide chrome plated escutcheon plates enough to cover the pipe sleeves. Sleeves shall be sized as follows:

1"	pipe-2"	ID Sleeve
1 ¼"	pipe-2"	ID Sleeve
1 ½"	pipe-2 1/2"	ID Sleeve
2"	pipe-3"	ID Sleeve
2 ½"	pipe-4"	ID Sleeve
3"	pipe-5"	ID Sleeve
4"	pipe-6"	ID Sleeve
6"	pipe-8"	ID Sleeve
8"	pipe-10"	ID Sleeve

J. PIPE SUPPORTS

i. All piping shall be supported by means of hangers of approved quality, capable of supporting load. Sizing, spacing and installation shall be in accordance with national Fire Protection

Association Standard No. 13, "Sprinkler Systems", except as otherwise shown on drawings or specified herein.
ii. The Fire Protection Contractor shall furnish and install the required sprinkler pipe seismic sway bracing for the risers, feed main pipe and cross main pipe all in accordance with tables and figures shown NFPA-13 requirements for the protection of the piping against breakage due to seismic earthquake movement.

iii. No cutting, drilling, welding or burning of any structural steel member shall be allowed. Power driven studs and welding studs shall not be allowed.

iv. All bolts and threaded rods shall be used with double nut and washer and lock washer wherever a single unsecured nut could work loose and allow either threaded rod or supported piping to drop.

K. PIPE SUPPORTS

i. The Fire Protection Contractor shall conduct and bear the costs of all necessary tests of the fire protection work, furnishing all labor, power and equipment. All piping shall be tested with water and test witnessed by representatives of the Architect/Engineer and the Owner.

ii. The fire protection piping shall be tested under a hydrostatic pressure of not less the 200lbs. PSIG, for a duration of not less than two (2) hours or at 50 lbs. psi in excess of the maximum static pressure when the maximum pressure is in excess of 150 lbs. psi.

iii. The piping subjected to the hydrostatic test shall be filled with water and thoroughly checked for the elimination of all air. The control valves shall be closed during pressure testing. All joints shall be proven tight or acceptable by the test. Defective work or materials shall be corrected or replaced in approved manner. If necessary, piping shall be dismantled and re-assembled with the use of new pipe or fittings as no caulking or makeshift method of temporary repair of defective work will be permitted. Test shall be repeated until the particular line or system receives the approval of the representatives of the Architect / Engineer.

iv. Acceptance of the fire protection work shall be based upon the inspection and tests of the completed installation by representatives of the local fire department, Architect, Engineer, PIRA and the Owner.

9. AIR CONDITIONING AND VENTILATING SYSTEM

A. PIPE SUPPORTS

Standards Compliance

a. Philippine Society of Mechanical Engineers Code
b. Philippine National Building Code
c. Philippine Electrical Code
d. Philippine Plumbing Code
e. Fire Code of the Philippines
f. American Society of Heating, Refrigeration and Air Conditioning Engineers (ASHRAE)
g. Sheet Metal and Air Conditioning Contractors National Association (SMACNA)
h. National Fire Protection Association
i. American Society of Testing Materials (ASTM)
j. Air Moving and Conditioning Association (AMCA)
k. American National Standard Institute (AMSI)
l. National Electrical Manufacturing Association (NEMA)
m. Underwriters Laboratory
n. American Society of Mechanical Engineers (ASME)

Scope of Work

a. Supply and Installation of Equipment and Materials. Complete.
b. Supply and installation of pipes and fittings, valves and appurtenances, ducts,

miscellaneous and consumables.
c. Fabrication and installation pf hangers and supports.
d. Supply and installation of control, wiring from Split-Type Air-conditioner to circuit breakers and others to complete the control system.
e. Testing, adjusting, balancing and commissioning.
f. Provide shop drawings and two (2) sets of "As-Built" plans
g. Furnishing of written one (1) year warranty of ventilation and air-conditioning system

Submittals

a. Within fifteen (15) days after award of contract, the mechanical contractor shall submit for engineer's approval, four (4) copies of all complete list of manufacturer's names of all materials he proposes to use.
b. After approval of the above list and before purchase of any equipment or materials, the mechanical contractor shall submit to the engineer for approval, four (4) complete sets of detailed information consisting of manufacturer's bulletins, shop drawings and partial list of materials to be provided under this contract.
c. The mechanical contractor shall assume the loss of and the entire responsibility of any change in the work as shown in the contract drawings which may be occasioned by approval of materials other than those specified.

B. PRODUCTS

AIR COOLED CONDENSING UNITS

a.Units shall have capacity and configuration as shown on the drawings and as manufactured by a reputable manufacturer. All units shall be furnished factory assembled, tested and piped complete with compressors fan, motors, integrally wired control panel, starters, spring type vibration isolators, steel base and refrigerant control accessories. Unit shall have gauge corrosion protected weatherproof casing.
b. Compressors for units with capabilities of up to 35160 watts and above shall be of semi-hermetic type and rated to operate at not more than 1750 RPM at full load. Compressors for units with capabilities of 26375 watts and below shall be of the hermetic type and rated to operate at not more than 3500 RPM at full load.
c. Condenser coils shall be seamless copper with mechanically bonded aluminum plate fins. Coil size, refrigerant circuiting and number of rows deep shall be compatible with the compressor displacement and capacity at the specified operating conditions with minimum refrigerant pressure drop.
d. Condenser fans shall be statically and dynamically balanced propeller-type fans directly driven by totally enclosed and inherently protected motors.
e. Motor starters, control components and power terminal shall be grouped in an accessible control box inside the unit casing. Electrical components shall be pre-wired and control circuits shall be independently protected with fuses or breakers. Compressor protection shall include automatic relays to prevent excessive compressor short cycling.
f. A complete charge of refrigerant 41 0A and compressor oil shall be furnished.

FAN COIL UNITS

a. Units shall either be of the floor-mounted or the ceiling-mounted, free blow type and/or ducted type as shown on the drawings.
b. Units shall have capacities at the operating conditions specified. They shall include an evaporator coil; expansion valve, centrifugal type air circulation blower, permanent type air filter, condensate drip pans and insulated decorative cabinet with discharge plenum, supply and return air grilles.

c. Fan motors shall be equipped with overload protection. They shall have fan switch and thermostat mounted on the unit.

CEILING-MOUNTED TYPE FANS

a. Units shall be ceiling-mounted type, direct driven and equipped with reverse flow prevention damper.
b. It shall have one-touch spring type louver for ease of cleaning and maintenance.
c. Fan casing shall be seam-welded and finished with corrosion resistant paint.
d. Fan shall have capacity and motor size as indicated in the plans.

PROPELLER EXHAUST FANS

a. Units shall be propeller type, suitable for wall mounting, direct-driven and equipped with gravity shutters.
b. It shall have wall mounting collar and fan guard.
c. Units shall have statically and dynamically balanced propeller set on a deep venture orifice. Unit shall be designed for continuous operation and shall be permanently lubricated. Inherent motor overload protection shall be provided.
d. Unit shall be epoxy-coated and finished with corrosion resistant paint.
e. Fans shall have capacity speed and motor size as indicated on the plans.
f. Fans shall be provided with a remote selector switch.

EXHAUST BLOWER

Furnish and install supply exhaust blowers as shown and as indicated on the drawings, complete with motors, belt sheaves vibration isolators.

C. BASIC MATERIALS AND METHODS

REFRIGERANT PIPING

a. Refrigerant piping shall be type L hard drawn seamless copper, suitable for a working pressure of 2,413 KPa. Fitting shall be wrought copper or brass designed for use with high temperature solder and suitable for a working pressure of not less than 2,413. Joints from soldered to threaded joints shall be made with standard adapter fittings using high temperature solder.

Pipes or tubings shall be cut accurately to measurements established at the building lines. All piping shall be laid straight and no pipe shall be laid against other metal without insulation. After cutting, the tubing shall be reamed, all burrs removed and the internal surfaces thoroughly cleaned. While soldering pipes and fittings together, a continuous flow of inert nitrogen gas must be applied to sweep the internal surface of the tubing to avoid the formation of oxide inside.

b. Condensate drain piping shall be of galvanized iron sh. 40 pipes and sized to liberally dispose of the condensate to the nearest floor drain. A P-trap without cleanout plugs shall be provided at the outlet for every drain.

c. Pipe supports and hangers shall be provided and fabricated in a workmanship manner out of steel angles, rods and flat bars. Metal to metal contact between pipes and hangers must be avoided by providing a 3mm thick rubber in between.

d. Supports on horizontal lines shall be spaced at not more than 1.80 meters on center. All piping must be properly anchored sot that no stress is placed on equipment connection by expansion.

e. Pipe sleeves shall be of standard pipes with sufficient diameter to provide a minimum clearance of 6mm around the pipe and in case of insulated

pipe, approximately 6mm around the insulation. Pipes should not be permitted to pass through the bearing walls, beams or columns.

f. Refrigerant pipes sizes shown on the drawings are for guide purposes only. Contractor is advised to confirm with the equipment supplier the required pipe sleeves for the units prior to installation at the jobsite.

D. AIR CONDITIONING CONTROL SYSTEM

i. Operation of the air conditioning system shall be fully automatic. They shall be capable of maintaining at full or partial loads inside conditions of 25 C.D.B. (plus or minus 1.11°C0 and 50% relative humidity (plus or minus 5% RH). Room thermostat shall control the operation of the compression through relays.

ii. The controls shall be wired in such a way that whenever a condensing unit is in operation, the fan coil unit or air handling unit is also in operation.

iii. The compressor crankcase heater must be of such capacity as to provide sufficient heat to the oil in the crankcase during the inoperative periods so that the serious oil foaming and slugging shall be prevented. The heater must be automatically energized whenever compressor operation stops and de-energized when the compressor starts.

E. REFRIGERANT VALVES AND ACCESSORIES

i. Refrigerant valves shall be installed in the suction and discharge lines adjacent to the compressor and on the liquid line discharge side of the condenser. The valves should be wrought copper or brass for use with R-41 0A and suitable for a working pressure of 2,413 KPa.

ii. Thermostatic expansion valves of the properly capacity shall be installed in the refrigerant supply line to the evaporator. They shall be of the diaphragm type, externally equalized and must be of such optimum size as to maintain a full active evaporator under all conditions and yet reduce the possibility of flooding the refrigerant to the compressors during part load conditions.

iii. Solenoid valves shall be installed on units with capacities of 26,375 watts and above and shall be designed for the operating pressure of the system. Valve capacities shall be based on a pressure drop across them not exceeding 20 KPa.

iv. Dehydrators in combination with strainers shall be installed in the refrigerant line on the inlet side of the thermostatic expansion and solenoid valves. They shall have brass or copper bodies designed for a working pressure of 2,413 KPa.

v. Sight glasses shall be a combination of liquid and moisture indicators and shall be installed in the refrigerant to indicate whether or not the systems are properly charged and whether or not refrigerant in the system is dry.

F. REFRIGERANT PIPE INSULATION

i. Refrigerant piping insulation shall be applied on all refrigerant suction and condensate drain lines. Insulation material shall be flexible elastomeric pipe insulation 25mm thk. Joints shall be sealed with appropriate contact adhesive. Pipes installed outdoor shall be provided with Ga.26 aluminum cladding.

G. ELECTRICAL MATERIALS

ELECTRIC MOTORS

i. All motors shall operate at speed and electrical characteristics specified. They shall be guaranteed to operate at rated out-put with plus or minus ten (10) percent voltage variation at their terminals.

ii. Motors 750 watts and above shall be 3-phase squirrel cage induction type, constant speed. Motors 560 watts and below shall be single-phase capacitor start induction run, or split type or shaded pole type as approved for the service.

iii. Motor driving indoor equipment shall be of the open drip-proof construction. Motors driving outdoor equipment shall be of the totally enclosed fan cooled construction.

iv. Motors driving equipment through pulleys and belts shall be provided with belt guards. The belt guards shall be made of heavy wire mesh or expanded metal set in a suitable frame covering the motor pulleys, belt and driving sheaves with access plates for tachometer reading.

MOTOR CONTROLERS

i. All motors starters shall be of magnetic type complete with overload and relays manufactured in accordance with NEMA standards. Enclosures shall be a suitable for the application

ii. Starters for motor 3. 73 kw and below shall be across the line type. Starters for motor above 3. 73 Kw shall be of the reduced voltage type

iii. Circuit breakers shall operate on the thermal magnetic principle. Aside from serving as disconnecting means, they shall afford protection for motor against phasing circuits faults. They shall be provided with enclosures suitable for the application

iv. All motors shall be provided with an over and under voltage protection device.

WIRING

i. All electrical power and control wiring necessary to be provided by the contractor shall be accomplished in accordance with the requirements of the electrical plans and specifications and shall conform to the Philippine Electrical Code. Wiring system including materials shall also comply with the specifications under the electrical division of the project

ELECTRICAL INTERLOCKS

i. For motors requiring electrical interlocks, remote control or sequence starting control features, starters shall be equipped with necessary auxiliary contacts or terminals to provide the control feature required. A separate set of terminals is required for each control circuit. Such starter shall be provided with "man-off-auto" selection switches. Other starters shall have a start-stop push buttons mounted in covers.

ii. Except where otherwise specified, enclosure shall be sheet metal with hinged cover, NEMA type I for the general-purpose indoor application. Starters shall be arranged for floor or wall mounting as shown or as indicated.

iii. Pilot light shall be provided for all starters where the equipment is not visible from the starter and for all remote-control stations.

iv. Where possible, relays and switches that are not part of the automatic control system shall be mounted on the same panel as the corresponding

motor starter. All supports for the stating equipment shall be furnished and installed by the A/C contractor.

v. This contractor shall furnish detailed wiring diagram to those installing the electrical wire and furnish all information necessary to assure the proper connection, operation and control of motorized equipment including interlocks, automatic and safety control auxiliary circuit

PAINTING AND FINISHING

i. Pipe hangers, duct hangers, uninsulated piping and other ferrous metal work that have not received factory painting shall be thoroughly cleaned and given two (2) coats of rust preventive paint.

H. EXECUTION

EQUIPMENT

i. Install all equipment as indicated and in accordance with the manufacturer's instructions. Provide clearance for inspection, repair, replacement and service. Provide conduits for wirings. Equip motors with unfused safety switches and overload protection in the operating disconnects switches and magnetic starters. Schedule and administer specified test.

PIPING SYSTEM

i. Install piping and piping components to ensure proper and efficient operation of the equipment and controls. Proper supports for the mounting of vibration isolators, stands, guides, anchors, clamps and brackets shall be provided. Piping connections to equipment shall; be arranged so that removal or equipment can be accomplished with the least amount of disassembly or removal of the piping system. Allow sufficient pitch to ensure adequate drainage and venting. Hydrotest the piping system and conduct testing, adjusting and balancing of water flow to ensure efficient system performance.

I. GUARANTEE AND SERVICE

The air conditioning and ventilating system equipment and accessories furnished and installed under this part of the specifications shall be guaranteed for a period of one (1) year from the date of acceptance thereof, and materials and equipment furnished shall be free from any defects in the materials, workmanship and design.

At any time within one year after the acceptance and upon proper notice, the contractor shall rectify any and all deficiencies including replacements of parts or the entire units without additional cost of the owner, if such deficiencies have been caused directly or indirectly by inferior materials, faulty workmanship and/or defective design or parts.

Expendable items such as oil, refrigerant, belts, filters, etc. are included in this one-year guarantee. During the guarantee period, the contractor shall perform free monthly inspection and service and make adjustments if necessary for the proper and efficient operation of the system

10. CONVEYING SYSTEM - ELEVATOR

A. GENERAL

B. SCOPE OF WORK

This section covers the requirements for passenger elevators and service elevators, complete.

C. QUALITY ASSURANCE

Materials and equipment shall be the product of manufacturers regularly engaged in the manufacture of such products.

D. WELDER QUALIFICATIONS

The quality of welding and welding procedures shall be determined by testing the welder's ability to make sound welds, under standard working conditions with the equipment to be used in the work on this project, and in conformance with AWS D1 .1, Section 5. Submit certified copies of the qualification of the welders employed on the contract.

Each welder shall identify his work with a code marking. Furnish a listing of the names of the welders with their corresponding code marks. Welders making defective welds during qualification tests and welders responsible for making defective welds after passing the test shall be given a requalification test. Reassign any welder who fails a requalification test.

E. SUBMITTALS

a. Manufacturer's Brochures and Layout Drawings: Submit manufacturer's brochures and layout drawings for approval before delivery of materials and equipment. Submit two samples of flooring to be used for passenger car platform. They shall contain enough detailed information to determine that the equipment conforms with the requirements of this specification and not less than the following information:

i. Layout drawings depicting the location and arrangement of machinery and controls in machine room.
ii. Drawings and catalog cuts for Contractor - furnished items and equipment including doors, frames, car enclosures, car frame, safety device, governor, buffers, controllers, selectors, motors, traction equipment, guide rails and brackets. Provide a complete layout of the hoist way in plan and elevation.
iii. Complete information on machine, motor generator set, brake, control system and buffers.

b. Operations and Maintenance Instructions: Furnish three complete sets of bound operating and maintenance instructions specifically for this installation. Operating portion shall be bound separately from maintenance portion. Explain in detail any components or methods peculiar to a particular system. Furnish one complete manual prior to the time that the equipment test is performed. Furnish the remaining manuals before the contract is completed.

c. Posted operating Instructions:

i. Wiring Diagrams and Sequence of Operation: Furnish complete wiring diagrams showing the electrical connections, functions and sequence of operation of apparatus connected with the elevators, both in the machine room and in the hoist way.

Provide such diagrams in quadruplicate at the time of the final inspection and acceptance. One set shall be plastic or glass-covered, framed and mounted in the elevator machine room. The other set shall be delivered to the Architect.

ii. Lubrication Chart: Furnish one plastic or glass-covered and framed lubrication chart. Mount this chart as directed in the elevator machine

room. This chart shall identify lubricants as well as lubrication points and required frequency of application.

F. PRODUCTS

a. The elevator equipment shall be an AC (no motor generator required) feedback control elevator. The elevator car and hoist way doors shall be fully, automatically powered.

Passenger Elevator 1

i. Type , Freight Type
ii. No of Cars 2 Units
iii. Capacity 3000 KGS
iv. Speed 1.0 m ls
v. Traction Machine Machine Power Supply
vi. Power Supply 220 -230 V
vii. Travel FE 1 & 2 - 19,400
viii. Number of Stops FE 1 & 2 - 5 Stops (Basement to Fourth Floor)
ix. Car Dimension 2200mm x 2500mm
x. Door Operation Four (4) Panels Center Opening
xi. Door Opening 2000m m x 2600m m
xii. Car Interior Refer to Architect
xiii. Hoist way Size 3400mm x 3000mm
xiv. PIT 1450mm

G. EXECUTION

a. COMPLIANCE: When the elevator work included in the contract is fully complete, the Contractors shall notify the Architect in writing that the elevator is ready for final inspection and acceptance tests. Obtain the services of a certified elevator inspector the Contractor shall be fully responsible to perform all tests and demonstrate the proper operation of all parts and provisions of the equipment. The contractor shall prove to the satisfaction of the architect and the elevator inspector that the elevator as installed complies with the requirements of the contract.

b. FINAL INSPECTION: In addition to any others tests, make the following tests at the time of final inspection.

i. Test Period: Subject the elevator to a test for a period of one-hour continuous run, with specified rated load in the car. During the test run, the car shall be stopped at all floors in both directions of travel for a standing period of 10 seconds per floor. Provide also a manual test of the final limits (up and down over travel).

ii. Speed Load Test: Determine the actual speed of the elevator car, in both directions of travel with the rated load and with not load in the elevator car. Make speed tests before the rated-load test run and also after the rated load test run. Determine speed by applying a tachometer to the car hoisting cables. The actual measured speed of elevator car with the rated load in the "UP" direction shall be within 5 percent of the rated speed. The maximum difference in actual measured speeds obtained under the various condition's outlines shall not exceed 10 percent of the total difference between the "UP" and "DOWN" directions.

iii. Car leveling tests: test elevator car leveling devices for accuracy of landing at all floors with no load in car, symmetrical load in car, and with the rated load in car, in both directions of travel. Determine the accuracy of floor landing both before and after the rated full-load run test.

iv. Brake Test: conduct brake test with the rated load in the car. Brakes shall stop and hold the car with the rated load.

v. Insulation resistance tests: the complete wiring systems of the elevator shall be free from short circuits and grounds, and the insulation resistance shall be determined by use of a "Megger". Conductors shall an insulation resistance of not less than one mega ohm between each conductor and ground and between each conductor and all other conductors.

vi. Buffer test: test buffers for car

vii. Certification: in addition to the test required, the contractor shall provide evidence of certification by a public authority of competent jurisdiction for the project area, stating that each governor and car safety has been tested and approved for use with the equipment having the specific ratings indicated or specified. Include the following data on a date plate attached to each safety:

viii.

- Manufacturer's name
- Model and type designation
- Maximum tripping speed in meters per minute
- Maximum gross load, in kilograms which the safety is designed to stop and sustain as installed.
- The date of the safety test, made during the elevator inspection and acceptance tests witnessed by a certified elevator inspector, his name and certificate number.

c. REINSPECTION: if any equipment is found to be damaged or defective, or if the performance of the elevator does not conform to the requirements of the contract specifications or the safety code, no certificate of approval shall be issued, until all the defects have been corrected. When the repairs and adjustments have been completed and the discrepancies corrected, the architect shall be notified and the elevator shall be re-inspected. Do not use rejected elevators until they have been re-inspected and approved.

Note: In contrast between these Technical Specifications and the approved Plans issued to the Contractor, the approved Plans shall prevail. See also the approved program of works. In case of doubt, for clearer outlooks consult the assigned Architect/Engineer.

ENGR. JOHN LESTER B. FRANCISCO
C.E., Planning and Design Division

ENGR. MARILENE F. COMENDADOR
C.E., Planning and Design Division

ENGR. JONATHAN A. DELA CRUZ
C.E., Planning and Design Division

ENGR. KELVIN M. MARZONIA
E.E., Planning and Design Division

ENGR. DEXTER DL. ZAMUDIO
M.E., Planning and Design 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.]

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.

BILL OF QUANTITIES

(Building Construction/Rehabilitation Project)

PROJECT TITLE : PROPOSED CONSTRUCTION OF FOUR (4) STOREY WITH DECK GALAS PUBLIC MARKET BUILDING 2 (COMPLETION PHASE) AT BARANGAY SAN ISIDRO GALAS
LOCATION : BARANGAY SAN ISIDRO GALAS
PROJECT NO. : 25-00009
DURATION : Four Hundred Twenty (420) Calendar Days

ITEM CODE	DESCRIPTION	QUANTITY	UNIT	ESTIMATED DIRECT COST	MARK-UP IN %		TOTAL MARK-UP		VAT	TOTAL INDIRECT COST	TOTAL COST	UNIT COST
					OCM	PROFIT	%	VALUE				
A1.1(8)	Provision of Field Office for the Engineer (Rental Basis)	14	mo									
	TOTAL OF PART I											
B.5	Project Billboard / Sign Board	1	ea									
B.7(1)	Occupational Safety and Health Program	14	mo									
B.9	Mobilization	1	lot									
B.9	Demobilization	1	lot									
B.24	Scaffolding (Rental)	590	m²									
	TOTAL OF PART I											
900(1)c1	Structural Concrete, Class A, 28 Days (3000 PSI)	16	m³									
902(1)a	Reinfor	158,472	kg									
	Reinfor	113,976	kg									
	TOTAL OF PART III A											
B.1 Moisture Protection												
1016(1)b	Liquid Waterproofing (Polyurethane)	101	m²									
1016(1)a	Waterproofing, Cement - Base	506	m²									

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B.2 Masonry Works												
1021(3)a	Floor Topping, Plain	6,204	m²									
1027(1)	Cement Plaster Finish	4,426	m²									
1046(2)a1	100 mm CHB Non Load Bearing Wall (including Reinforcing Steel)	1,340	m²									
1046(2)a2	150 mm CHB Non Load Bearing Wall (including Reinforcing Steel)	1,155	m²									
1046(3)	Concrete Metering Wall	1	set									
B.3 Fabricated Materials and Hardwares												
1047 (1)	Structural Steel	112,716	kg									
1003(1)e2	Ceiling, Metal Frame, 12mm Moisture Resistant Gypsum Board	101	m²									
1003(1)e3	Ceiling, 16mm Metal Frame, Fiber Cement Board	766	m²									
1003(2)a1	Wall,16mm Metal Frame, Fiber Cement Board	688	m²									
1003(3)b	1'4" thick Ordinary Plywood	157	m²									
1006(1)	Steel Louver Door	30	m²									
1006(1)a	Steel Gate	14	m²									
1010(2)b	Doors, Wood Panel	10	m²									
1010(2)b1	Doors, Wood Panel with Glass Panel	2	m²									
1010(2)c	Flush Door (Hollow)	7	m²									
1010(2)d	Flush Door with Louvers	13	m²									
1011(1)b	Roll-Up Door	32	m²									
1012(1)a	Lever Type Lockset	29	set									
1012(1)c	Hinges	128	set									
1012(1)d	Frames (Jambs, Sill, Head, Transom, and Mullions)	26	set									

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1012(4)	Steel Louvered Window	10	m²									
1012(4)a	Jalousie Windows (Glass)	8	m²									
1012(4)b	Casement Windows (Glass)	15	m²									
1012(4)c	Awning Windows (Glass)	17	m²									
1013(1)a	Glass Blocks	14	m²									
1030(a)1	Stainless Steel Letterings "GALAS PUBLIC MARKET"	17	set									
1030(a)2	QC Logo	1	set									
1044(1)	Comfort Room Partition (Toilet)	90	m²									
1044(2)	Comfort Room Partition (Urinal)	12	set									
B.4 Finishing Works												
1018(1)	Glazed Tiles and Trims	409	m²									
1018(2)	Unglazed Tiles	388	m²									
1018(3)	Porcelain Tiles with Pebble Washout Border	1,775	m²									
1021(1)	Plain Cement Finish	4,042	m²									
1021(1)b	Plain Cement Finish with Groove Lines	562	m²									
1021(1)c	Crushed Gravel with Groove Lines	884	m²									
1028(6)	Epoxy Paint Finish	66	m²									
1028(7)a	Tactile Blocks	11	m²									
1039(1)	4mm Thick Aluminum Wall Cladding	292	m²									
1039(1)a	20mm Thick Granite Slab	12	m²									

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					OCM	PROFIT	%	VALUE				
B.5 Painting Works												
612(1)	Reflectorized Thermoplastic Paint	110	m²									
1032(1)a	Painting Works, Masonry/Concrete	9,992	m²									
1032(1)b	Painting Works, Wood	2,243	m²									
1032(1)c	Painting Works, Steel	7,312	m²									
B.6 Roofing Works												
1014(1)b2	Prepainted Metal Sheets, Gauge 24, Rib Type, Long Span	2,546	m²									
1038(1)	Reflective Insulation	2,546	m²									
1013(2)b1	Fabricated Metal Roofing Accessory (Gutter)	99	l.m.									
	TOTAL OF PART III B											
C.1 Sewer Line Works												
1001 (1) a5	50mm Ø PVC Pipe and Fittings with Hanger/Support	382	l.m.									
1001 (1) a6	75mm Ø PVC Pipe and Fittings with Hanger/Support	303	l.m.									
1001 (1) a7	100mm Ø PVC Pipe and Fittings with Hanger/Support	531	l.m.									
1001 (1) a8	150mm Ø PVC Pipe and Fittings with Hanger/Support	152	l.m.									
C.2 Water Line Works												
1002 (2) a3	20mm Ø PPR Pipe and Fittings with Hanger/Support	106	l.m.									
1002 (2) b3	25mm Ø PPR Pipe and Fittings with Hanger/Support	15	l.m.									
1002 (2) c3	32mm Ø PPR Pipe and Fittings with Hanger/Support	22	l.m.									
1002 (2) d3	40mm Ø PPR Pipe and Fittings with Hanger/Support	49	l.m.									
1002 (2) g3	75mm Ø PPR Pipe and Fittings with Hanger/Support	196	l.m.									
1002 (2) g3	90mm Ø PPR Pipe and Fittings with Hanger/Support	46	l.m.									

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C.3 Plumbing / Sanitary Fixtures												
1002 (5) c	Water Closet, Flush Valve-Type with Complete Fittings and Accessories, Pipes and Fittings	19	set									
1002 (5) a	Water Closet, Elongated, Tank Type, with Complete Accessories, Pipes and Fittings	3	set									
1002 (9) a	Urinal, Flush Valve Lever Type, with Complete Accessories, Pipes and Fittings	9	set									
1002 (13)	Slop Sink with Faucet and Complete Accessories, Pipes and Fittings	3	set									
1002 (14)	Lavatory Wall Hung with Faucet and Complete Accessories, Pipes and Fittings	4	set									
1002 (15) a	Lavatory Counter Top with Faucet and Complete Accessories, Pipes and Fittings	12	set									
1002 (16) a3	Floor Drain, 100mmØ, Stainless with Complete Accessories and Fittings	126	set									
1002 (16) c3	Deck Drain, 100mmØ with Complete Accessories and Fittings	51	set									
1002 (17)a	Roof Drain, 100mmØ	13	set									
1002 (19)b	PWD Grab Bar,40mm Ø Stainless	6	l.m.									
1002 (20)	6mm thk Mirror with 6mm thk Marine Plywood Backing	11	l.m.									
1002 (20)a	100mmØ Cleanout	17	set									
1002 (21)	150mmØ Air Vent Cap/Vent Thru Roof	6	set									
C.4 Valves and Appurtenances												
1002 (3)a	20mmØ Gate Valve	14	set									
1002 (3)d	40mmØ Gate Valve	6	set									
1002 (3)g	75mmØ Gate Valve	14	set									
1002 (3)h	90mmØ Gate Valve	2	set									
1002 (4)a	75mmØ Check Valve	3	set									
1002 (7)a	90mmØ Float Valve	2	piece									

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					OCM	PROFIT	%	VALUE				
1002 (7)b	150mmØ Float Valve	8	piece									
1002 (8)a	Cyclone Filter with Flush Diverter, 50 Liters Capacity	4	set									
C.5 Equipments												
1201 (1)a	BP 1 - Booster Pump, 5 HP, 128 GPM vs 100 ft. TDH, 220/3Ø/60hz	2	set									
1201 (1)b	EPP 1 - Elevator Pit Pump, 1/2 HP, 20 GPM vs 40 ft. TDH, 220/1Ø/60hz	1	set									
1201 (1)c	PT 1 - Pressure Tank, 250 gallons capacity, 20/40 psi	1	unit									
1201 (1)f	RWC - Rainwater Collector, 1000 gallons capacity	8	unit									
1201 (1)g	OHT - Overhead Tank, 2000 gallons capacity, 1/4" thk	2	unit									
	TOTAL OF PART III C											
D.1 Conduits, Boxes and Fittings												
1100 (6) a	20mmØ PVC Pipe	914	piece									
1100 (2) c	25mmØ IMC Pipe	14	piece									
1100 (2) d	32mmØ IMC Pipe	20	piece									
1100 (2) h	80mmØ IMC Pipe	17	piece									
1100	25mmØ IMC Elbow	4	piece									
1100	32mmØ IMC Elbow	6	piece									
1100	80mmØ IMC Elbow	2	piece									
1100	100mm x 100mm PVC Junction Box with Cover	341	set									
1100	50mm x 100mm PVC Utility Box	460	set									
1100	20mmØ Flexible Metal Conduit	150	set									
1100	Cable Tray, 50mm x 50mm x 2400mm, with Nuts and Bolts	10	unit									
1100	Cable Tray, 50mm x 100mm x 2400mm, with Nuts and Bolts	53	unit									

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1100	Cable Tray, 100mm x 150mm x 2400mm, with Nuts and Bolts	42	unit									
D.2 Wires and Wiring Devices												
1101	3.5mm² THHN Wire	5,480	l.m.									
1101	5.5mm² THHN Wire	8,920	l.m.									
1101	8.0mm² THHN Wire	60	l.m.									
1101	14mm² THHN Wire	60	l.m.									
1101	30mm² THHN Wire	120	l.m.									
1101	38mm² THHN Wire	60	l.m.									
1101	150mm² THHN Wire	150	l.m.									
1101	2.0mm² THW Wire	2,740	l.m.									
1101	3.5mm² THW Wire	4,460	l.m.									
1101	5.5mm² THW Wire	40	l.m.									
1101	8.0mm² THW Wire	60	l.m.									
1101	38mm² THW Wire	50	l.m.									
1101	Switch with Plate and Cover, One-Gang	184	piece									
1101	Switch with Plate and Cover, Two-Gang	12	piece									
1101	Switch with Plate and Cover, Three-Gang	8	piece									
1101	Switch with Plate and Cover, Three-Way	10	piece									
1101	Outlet with Grounding, One-Gang	70	piece									
1101	Outlet with Grounding, Two-Gang	176	piece									
1101	Emergency Light, Dual Optics	64	piece									
1101	LED Exit Light, 3W, 360mmx150mmx25mm	6	piece									

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					OCM	PROFIT	%	VALUE				
D.3 Panelboard with Main and Branch Breakers												
1102	MCC, 300AT, 3P	1	set									
1102	LPPC, 100AT, 3P	1	set									
1102	LPPD, 100AT, 3P	1	set									
1102	LPP STP, 70AT, 3P	1	set									
1102	30AT, 2P, CARINDERIA STALLS TYPICAL	81	set									
1102	ECB, 125AT, 3P	1	set									
1102	ECB, 50AT, 3P	1	set									
1102(1)	Electrical Sub - Meter	1	piece									
1103(1)	600mm x 600mm with 2 x 10w LED, Troffer Surface Type	20	set									
1103(1)	300mm x 1200mm with 1 x 18w LED, Troffer Surface Type	4	set									
1103(1)	300mm x 1200mm Surface Mounted Box Type Lighting Fixture with 1-18W Daylight LED Tube	177	set									
1103(1)	1 x 18w LED, Dust Proof Cover, Surface Mounted Type	16	set									
1103(1)	150mm Ø Round Recessed Pinlight with 9W LED Bulb	11	set									
1103(1)	100mmØ Plastic Receptacle with 9W LED Bulb	83	set									
1103(1)	LED Low Bay Lighting Fixture	30	set									
D.4 Auxillary System - FDAS												
1104(1)	20mmØ EMT Pipe	555	piece									
1104(1)	40mmØ EMT Pipe	10	piece									
1105(1)	20mmØ EMT Elbow	278	piece									
1105(1)	40mmØ EMT Elbow	4	piece									
1105(1)	100mm x 100mm Metal Junction Box	151	set									

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PROJECT NO. : 25-00009
DURATION : Four Hundred Twenty (420) Calendar Days

ITEM CODE	DESCRIPTION	QUANTITY	UNIT	ESTIMATED DIRECT COST	MARK-UP IN %		TOTAL MARK-UP		VAT	TOTAL INDIRECT COST	TOTAL COST	UNIT COST
					OCM	PROFIT	%	VALUE				
1105(1)	Fabricated Pull Box (0.30m x 0.30m x 0.35m)	3	set									
1105(1)	2.0mm² THW Wire	9,990	l.m									
1105(1)	UTP Cable, CAT6, 4-Pairs	50	l.m									
1105(1)	Smoke Detector	69	piece									
1105(1)	Heat Detector	45	piece									
1105(1)	Manual Pull Station, Horn with Strobe Light and Alarm Bell	25	set									
1104(1)	Annunciator	6	piece									
1104(1)	Input Module	6	piece									
D.5 Auxiliary System - Voice and Data												
1105(1)	50mmØ PVC Pipe	30	piece									
1105(1)	50mmØ PVC Elbow	3	piece									
1105(1)	100mm x 100mm Metal Junction Box with Cover	5	set									
1105(1)	UTP Cable, CAT6, 4-Pairs	300	l.m									
1106(1)	20mmØ Liquidtight Flexible Nonmetallic Conduit	150	piece									
1106(1)	20mmØ EMT Pipe	493	piece									
1106(1)	40mmØ EMT Pipe	12	piece									
1106(1)	100mm x 100mm Metal Junction Box	31	set									
1106(1)	Fabricated Pull Box (0.30m x 0.30m x 0.35m)	6	set									
1106(1)	OM3 Fiber Optic Cable (6-Core)	600	l.m									
1106(1)	UTP Cable, CAT6, 4-Pairs	1,477	l.m									

BILL OF QUANTITIES

(Building Construction/Rehabilitation Project)

PROJECT TITLE : PROPOSED CONSTRUCTION OF FOUR (4) STOREY WITH DECK GALAS PUBLIC MARKET BUILDING 2 (COMPLETION PHASE) AT BARANGAY SAN ISIDRO GALAS
LOCATION : BARANGAY SAN ISIDRO GALAS
PROJECT NO. : 25-00009
DURATION : Four Hundred Twenty (420) Calendar Days

ITEM CODE	DESCRIPTION	QUANTITY	UNIT	ESTIMATED DIRECT COST	MARK-UP IN %		TOTAL MARK-UP		VAT	TOTAL INDIRECT COST	TOTAL COST	UNIT COST
					OCM	PROFIT	%	VALUE				
D.6 Auxiliary System - CCTV												
1106(1)	HD CCTV Camera, IP-based, Bullet Type	18	piece									
1106(1)	HD CCTV Camera, IP-based, Dome Type	13	piece									
1107(1)	32" 4K UHD Smart Monitor LED Display	3	set									
1106(1)	DIGITAL DISPLAY (PARKING MANAGEMENT)	2	set									
1106(1)	LED Light Indicator and Occupancy Sensor	39	set									
1107(1)	20mmØ Liquidtight Flexible Nonmetallic Conduit	100	piece									
1107(1)	20mmØ EMT Pipe	365	piece									
1107(1)	40mmØ EMT Pipe	8	piece									
1107(1)	50mmØ EMT Pipe	6	piece									
1107(1)	100mm x 100mm Metal Junction Box	38	set									
1107(1)	OM3 Fiber Optic Cable (6-Core)	200	l.m									
1106(1)	UTP Cable, CAT6, 4-Pairs	1,095	l.m									
1107(1)	IP Network Ceiling Spekear, 10W	14	piece									
1107(1)	IP Network Column Speaker, 20W, IPX6 Grade	24	piece									
1107(1)	Lighting Arrester Dynasphere	1	piece									
	TOTAL OF PART III D											
Air-Conditioning System - Roughing-ins												
1200 (15)	6.35mm Ø Refrigerant Pipe with Insulation and Hanger	48	l.m.									
1200 (15) a	9.50mm Ø Refrigerant Pipe with Insulation and Hanger	41	l.m.									
1200 (15) c	15.90mm Ø Refrigerant Pipe with Insulation and Hanger	89	l.m.									

BILL OF QUANTITIES

(Building Construction/Rehabilitation Project)

PROJECT TITLE : PROPOSED CONSTRUCTION OF FOUR (4) STOREY WITH DECK GALAS PUBLIC MARKET BUILDING 2 (COMPLETION PHASE) AT BARANGAY SAN ISIDRO GALAS

LOCATION : BARANGAY SAN ISIDRO GALAS

PROJECT NO. : 25-00009

DURATION : Four Hundred Twenty (420) Calendar Days

ITEM CODE	DESCRIPTION	QUANTITY	UNIT	ESTIMATED DIRECT COST	MARK-UP IN %		TOTAL MARK-UP		VAT	TOTAL INDIRECT COST	TOTAL COST	UNIT COST
					OCM	PROFIT	%	VALUE				
1201 (1)	20mm Ø Condensate Pipe and Fittings with Insulation and Hanger	30	l.m.									
1201 (3)	32mm Ø Condensate Pipe and Fittings with Insulation and Hanger	6	l.m.									
Duct Works												
1200 (1)	Ducting, 22 Gauge G.I. Sheet, 300mm x 300mm	30	l.m.									
1200 (2)	Exhaust Air Grille (G.I.)	1	piece									
1200 (3)	Duct Caps 150Ø	11	piece									
1200 (4)	150mm Ø PVC Pipe and Fittings with Ducting Support	90	l.m.									
Split Type Air-Conditioner												
1200 (13) a	FCU/ACCU 1 - Wall mounted Type with Cooling Capacity of 24,200 BTUH	2	set									
1200 (13) b	FCU/ACCU 2 - Ceiling Cassette Type with Cooling Capacity of 20,500 BTUH	3	set									
Exhaust Fans												
1200 (5) a	EF1 - Ceiling Mounted Ducted Type Exhaust Fan with an Airflow Capacity of 200 - 205 CMH	16	set									
Ceiling Fan												
1200 (6) b	CF 2 - Ceiling Mounted Industrial Ceiling Fan, 60in. Fan Blade, 300 RPM, 150W, 220/1Ø/60Hz	31	set									
Freight Elevator												
1203 (2)	Supply and Installation of Freight Elevator 2000kg, 5 Stops, 5 Openings, 6.4KW Motor Capacity,	1	assy									
	TOTAL OF PART III E											
1202 (1) a	25mmØ, B.I. Pipe and Fittings with Hanger/Support	1,287	l.m.									
1202 (1) b	32mmØ, B.I. Pipe and Fittings with Hanger/Support	556	l.m.									
1202 (1) c	40mmØ, B.I. Pipe and Fittings with Hanger/Support	244	l.m.									
1202 (1) d	50mmØ, B.I. Pipe and Fittings with Hanger/Support	62	l.m.									
1202 (1) e	65mmØ, B.I. Pipe and Fittings with Hanger/Support	71	l.m.									
1202 (1) f	75mmØ, B.I. Pipe and Fittings with Hanger/Support	103	l.m.									

BILL OF QUANTITIES

(Building Construction/Rehabilitation Project)

PROJECT TITLE : PROPOSED CONSTRUCTION OF FOUR (4) STOREY WITH DECK GALAS PUBLIC MARKET BUILDING 2 (COMPLETION PHASE) AT BARANGAY SAN ISIDRO GALAS
LOCATION : BARANGAY SAN ISIDRO GALAS
PROJECT NO. : 25-00009
DURATION : Four Hundred Twenty (420) Calendar Days

ITEM CODE	DESCRIPTION	QUANTITY	UNIT	ESTIMATED DIRECT COST	MARK-UP IN %		TOTAL MARK-UP		VAT	TOTAL INDIRECT COST	TOTAL COST	UNIT COST
					OCM	PROFIT	%	VALUE				
1202 (1) h	100mmØ, B.I. Pipe and Fittings with Hanger/Support	128	l.m.									
1202 (1) k	32mm Ø B.I. Threadolet, Threaded	2	piece									
1202 (1) l	40mm Ø B.I. Threadolet, Threaded	68	piece									
1202 (1) m	50mm Ø B.I. Threadolet, Threaded	3	piece									
1202 (1) o	40mmØ, B.I., End Cap	6	piece									
1202(3)a	Sprinkler Head, Upright / Pendent / Sidewall	503	set									
1202(5)	Fire Hose Cabinet Assembly	6	set									
1202(5) a3	Fire Extinguisher (ABC)	3	set									
1202(5) a4	Fire Extinguisher (HCFC)	1	set									
1202 (9)	Roof Manifold (100mm Ø x 65mm Ø x 65mm Ø)	1	set									
1202 (10)	Floor Control Valve Assembly	3	set									
1202 (11)	Inspector Test Pipe	3	set									
	TOTAL OF PART III F											
	TOTAL OF PART III											
	GRAND TOTAL											

Section IX. Checklist of Technical and Financial Documents

Notes on the Checklist of Technical and Financial Documents

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

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

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

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

Checklist of Technical and Financial Documents

I. TECHNICAL COMPONENT ENVELOPE

Class "A" Documents

Legal Documents

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

Technical Documents

☐ (b) 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**

☐ (c) 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**

☐ (d) 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**

☐ (e) 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**

(f) 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**

☐ (g) 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

☐ (h) 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**

☐ (i) 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

☐ (j) 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

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

Other documentary requirements under RA No. 9184

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

☐ (m) 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**

☐ (n) Cash Flow by Quarter.

Bid Form for the Procurement of Infrastructure Projects

[shall be submitted with the Bid]

BID FORM

Date : _____

Project Identification No. : _____

To: [name and address of Procuring Entity]

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

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

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

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

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

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

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

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

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

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

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

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

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

and perform any and all acts necessary to participate, submit the bid, and to sign and execute the ensuing contract for the [Name of Project] of the [Name of the Procuring Entity].

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

Name: _____

Legal Capacity: _____

Signature: _____

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

Date: _____

Bid Securing Declaration Form

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

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

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

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

I/We, the undersigned, declare that:

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

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

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

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

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

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

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

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

Omnibus Sworn Statement (Revised)

[shall be submitted with the Bid]

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

AFFIDAVIT

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

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

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

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

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

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

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

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

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

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

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

   [If a sole proprietorship:] The owner or sole proprietor is not related to the Head of the Procuring Entity, Procurement Agent if engaged, members of the Bids and Awards Committee (BAC), the Technical Working Group, and the BAC Secretariat, the head of the

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

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

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

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

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

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

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

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

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

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

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

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

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

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

CONTRACT AGREEMENT

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

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

NOW THIS AGREEMENT WITNESSETH AS FOLLOWS:

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

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

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

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

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

   c. Performance Security;

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

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

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

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

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

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

Acknowledgment

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

LIST OF ALL ON-GOING GOVERNMENT AND PRIVATE CONTRACTS

NAME OF CONTRACTOR: _____

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

PHOTOCOPY ADDITIONAL FORMS IF NECESSARY

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

NAME OF CONTRACTOR: _____

PROJECT TITLE: _____

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

PHOTOCOPY ADDITIONAL FORMS, IF NECESSARY

SINGLE LARGEST COMPLETED CONTRACT SIMILAR TO THE CONTRACT TO BE BID

NAME OF CONTRACTOR: _____

PROJECT TITLE: _____

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

PHOTOCOPY ADDITIONAL FORMS, IF NECESSARY

LIST OF MAJOR EQUIPMENT TO BE USED FOR THE PROJECT

NAME OF CONTRACTOR: _____

PROJECT TITLE: _____

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

PHOTOCOPY ADDITIONAL FORMS, IF NECESSARY

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

NAME OF CONTRACTOR: _____

PROJECT TITLE: _____

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

PHOTOCOPY ADDITIONAL FORMS, IF NECESSARY

COMPUTATION OF NET FINANCIAL CONTRACTING CAPACITY (NFCC)

NAME OF BIDDER: _____

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

NOTES:

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

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

REPUBLIC OF THE PHILIPPINES)
_____) S. S.

AFFIDAVIT OF UNDERTAKING

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

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

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

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

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

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

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

AFFIANT FURTHER SAYETH NAUGHT.

_____
Affiant

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

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

_____
Notary Public


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