PHILIPPINE BIDDING DOCUMENTS

Procurement of INFRASTRUCTURE PROJECTS

Government of the Republic of the Philippines

PROPOSED CONSTRUCTION OF WAITING SHEDS FOR VARIOUS QUEZON CITY BUS STOPS (QUEZON CITY HALL BUS AUGMENTATION PROGRAM)

Project number:
22-00039

Sixth Edition
July 2020

Preface

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

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

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

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

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

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

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

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

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

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

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

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Glossary of Terms, Abbreviations, and Acronyms

ABC – Approved Budget for the Contract.

ARCC – Allowable Range of Contract Cost.

BAC – Bids and Awards Committee.

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

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

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

BIR – Bureau of Internal Revenue.

BSP – Bangko Sentral ng Pilipinas.

CDA – Cooperative Development Authority.

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

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

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

CPI – Consumer Price Index.

DOLE – Department of Labor and Employment.

DTI – Department of Trade and Industry.

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

GFI – Government Financial Institution.

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

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

GOP – Government of the Philippines.

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

LGUs – Local Government Units.

NFCC – Net Financial Contracting Capacity.

NGA – National Government Agency.

PCAB – Philippine Contractors Accreditation Board.

PhilGEPS - Philippine Government Electronic Procurement System.

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

PSA – Philippine Statistics Authority.

SEC – Securities and Exchange Commission.

SLCC – Single Largest Completed Contract.

UN – United Nations.

Section I. Invitation to Bid

Notes on the Invitation to Bid

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

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

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

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

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

d. Any important bid evaluation criteria.

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

REPUBLIC OF THE PHILIPPINES
QUEZON CITY GOVERNMENT
BIDS AND AWARDS COMMITTEE FOR INFRASTRACTURE & CONSULTANCY
2nd floor, Finance Building, Procurement Department, Quezon City Hall Complex, Elliptical Road, Quezon City

February 17, 2022

Invitation to Bid

No.	Project No.	Project Name	Location	Amount	Duration Cal. Days	Office	Source Fund
Buildings – Small B							
1	22-00002B	Proposed Construction of Hand Washing Facility and Rehabilitation of Day Care Center at District 5 / Area VIII (Cluster 3)	Kaligayahan , Fairview	4,390,415.05	60	Engineering Department	Engineering Department-Continuing Appropriation
2	22-00036	Proposed Rehabilitation of Comfort Rooms (DepEd Building B) at Goodwill Elementary School	Bagbag	1,502,623.78	60	Engineering Department	Special Education Fund
3	22-00037	Proposed Construction of Perimeter Fence and Rehabilitation of Gates and Guard House at Bistekville 1 at Barangay Payatas	Payatas	1,990,571.27	90	Engineering Department	Engineering Department-Continuing Appropriation
4	22-00038	Proposed Rehabilitation of 6th Floor and Upper Deck Ceiling and Waterproofing of Roof deck at Civic Building F at Quezon City Hall Compound	Central	5,864,452.20	90	Engineering Department	Engineering Department
5	22-00039	Proposed Construction of Waiting Sheds for Various Quezon City Bus Stops (Quezon City Hall Bus Augmentation Program)	Various Barangays	7,125,752.82	180	Engineering Department	Engineering Department-Continuing Appropriation
6	22-00040	Proposed Construction of Three (3) storey Multi-Purpose Building at Barangay Manresa	Manresa	9,702,527.91	180	Engineering Department	Engineering Department
7	22-00041	Proposed Renovation of Office of the City Mayor, Third Floor Main Building, QC Hall Compound at Barangay Central	Central	13,510,259.60	180	Engineering Department	Engineering Department
8	22-00042	Proposed Construction of Three (3) storey Multi-Purpose Building at Barangay Vasra	Vasra	17,261,582.72	210	Engineering Department	OCM-20% CDF
9	22-00043	Proposed Construction of Three (3) storey with Roof Deck Multi-Purpose Building at Barangay Bagumbayan	Bagumbayan	23,868,555.52	270	Engineering Department	OCM-20% CDF
10	22-00044	Proposed Construction of Multi-Purpose Building (at Madjaas Street) at Barangay Payatas B (Phase 2)	Payatas	27,173,801.07	210	Engineering Department	OCM-20% CDF

Buildings – Medium A							
11	22-00045	Proposed Construction of Four (4) storey with Deck Quezon City Schools Division Office Multi-Purpose Building at Barangay Sto. Cristo	Sto. Cristo	50,395,670.16	330	Engineering Department	OCM-20% CDF
12	22-00046	Proposed Construction of Four (4) storey with Roof Deck Barangay Hall at Barangay Greater Lagro	Greater Lagro	59,282,536.60	360	Engineering Department	Engineering Department
13	22-00047	Proposed Construction of four (4) storey Multi-Purpose Building (Evacuation Center, Offices and Volleyball Court) at Barangay Sta. Lucia	Sta. Lucia	76,318,551.21	330	Engineering Department	OCM-20% CDF
14	22-00048	Proposed Construction of Housing No. 17 (Wright Park) Phase 1	Bagong Silangan	106,575,757.08	360	Engineering Department	Housing Community Development Resettlement Dept.
Flood Control – Small B							
15	22-00049	Proposed Construction of Reinforced Concrete Canal at Sampaguita Creek (Sitio Pugot) in Barangay Payatas	Payatas	26,207,918.10	210	Engineering Department	OCM-20% CDF
16	22-00050	Proposed Construction of Reinforced Concrete Canal at Creek (Pocalari Compound)	Bagong Silangan	47,192,576.14	270	Engineering Department	OCM-20% CDF
Parks – Small B							
17	22-00051	Proposed Improvement of Blue Ridge B Park at Comets Loop Street	Blue Ridge B	6,221,182.85	135	Parks Development & Admin. Dept.	Engineering Department
18	22-00052	Proposed Improvement of North Olympus Park at Bethel Street, North Olympus Subdivision	Kaligayahan	7,232,959.22	135	Parks Development & Admin. Dept.	Engineering Department
19	22-00053	Proposed Improvement of Tandang Sora Shrine at Banlat Road	Tandang Sora	23,499,139.15	300	Parks Development & Admin. Dept.	Engineering Department
Roads – Small B							
20	22-00054	Proposed Rehabilitation of Drainage at Children's Museum and Library, Inc. (CMLI) and Nego-Eskwela Compound in Barangay Project 6	Project 6	2,424,449.10	90	Engineering Dept.	OCM-20% CDF
21	22-00055	Proposed Rehabilitation (Surface Improvement) of Champaca Street	Sauyo	3,337,874.58	30	Engineering Dept.	OCM-20% CDF

22	22-00056	Proposed Rehabilitation of Road and Drainage at Namappa Block 3 HOA	Batasan Hills	3,721,205.18	90	Engineering Dept.	OCM-20% CDF

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 ***18 February 2022 (Friday)*** from given address and website/s below *and upon payment of a non-refundable fee for the Bidding Documents, pursuant to the latest Guidelines issued by the GPPB.* The Procuring Entity shall allow the bidder to present its proof of payment for the fees *presented in person.*

STANDARD RATES:

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

The following are the requirements for purchase of Bidding Documents;

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

It must be duly received by the BAC Secretariat at 2nd Floor, Procurement Department, Finance Building, Quezon City Hall Compound on or before **February 28, 2022 - 5:00PM.**

6. The ***QC- BAC- INFRASTRUCTURE & CONSULTANCY*** will hold a Pre-Bid Conference[1] on **February 28, 2022** at **10:00 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.

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

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 16, 2022 – 9:00AM**. Late bids shall not be accepted.

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

9. Bid opening shall be on **March 16, 2022 - 10:00 AM** at **2nd Floor, Procurement Department-Bidding Room, Finance Building, Quezon City Hall Compound** and/or via Zoom. Bids will be opened in the presence of the bidders' representatives who choose to attend the activity.

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

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

11. For further information, please refer to:

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

12. You may visit the following websites:

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

By:

ATTY. MARK DALE DIAMOND P. PERRAL
Chairman, BAC-Infra and Consultancy

Section II. Instructions to Bidders

Notes on the Instructions to Bidders

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

1. Scope of Bid

The Procuring Entity, **Quezon City Government** invites Bids for the **PROPOSED CONSTRUCTION OF WAITING SHEDS FOR VARIOUS QUEZON CITY BUS STOPS (QUEZON CITY HALL BUS AUGMENTATION PROGRAM),** with Project Identification Number **22-00039.**

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

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

2. Funding Information

2.1. The GOP through the source of funding as indicated below for **2022** in the amount of **Seven Million One Hundred Twenty-Five Thousand Seven Hundred Fifty-Two Pesos and 82/100 Ctvs. (P 7,125,752.82)**

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 **February 28, 2022, 10:00 A.M. at 2nd Floor, Procurement Department-Bidding Room, Finance Building, Quezon City Hall Compound** and/or we encourage the prospective bidders to join through our **Virtual Conference (ZOOM APP) Meeting ID: 854 9489 0133 Password: 273320**

9. Clarification and Amendment of Bidding Documents

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

10. Documents Comprising the Bid: Eligibility and Technical Components

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

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

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

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

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

11. Documents Comprising the Bid: Financial Component

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

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

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

12. Alternative Bids

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

13. Bid Prices

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

14. Bid and Payment Currencies

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

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

a. Philippine Pesos.

15. Bid Security

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

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

16. Sealing and Marking of Bids

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

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

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

17. Deadline for Submission of Bids

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

18. Opening and Preliminary Examination of Bids

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

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

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

19. Detailed Evaluation and Comparison of Bids

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

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

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

20. Post Qualification

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

21. Signing of the Contract

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

Section III. Bid Data Sheet

Notes on the Bid Data Sheet (BDS)

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

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

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

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

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

Bid Data Sheet

<table>
<tr><th>ITB Clause</th><th></th></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 - Small B</td></tr>
<tr><td>10.4</td><td>The minimum work experience requirements for key personnel are the following:

<table>
<tr><th>Qnty.</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 Engineer</td><td>3 years</td><td>3 years</td></tr>
<tr><td>1</td><td>DPWH duly accredited Materials Engineer</td><td>3 years</td><td>3 years</td></tr>
<tr><td>1</td><td>Safety Officer</td><td>3 years</td><td>3 years</td></tr>
<tr><td>2</td><td>Steelman</td><td>3 years</td><td>3 years</td></tr>
<tr><td>2</td><td>Welder</td><td>3 years</td><td>3 years</td></tr>
<tr><td>2</td><td>Electrician</td><td>3 years</td><td>3 years</td></tr>
<tr><td>2</td><td>Carpenter</td><td>3 years</td><td>3 years</td></tr>
<tr><td>2</td><td>Painter</td><td>3 years</td><td>3 years</td></tr>
<tr><td>20</td><td>Laborer</td><td>1 year</td><td>3 months</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:

Equipment Capacity Number of Units</td></tr>
</table>

	Elf Truck 1 Scaffolding as needed Power Tools as needed Minor Tools as needed ***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 142,515.06 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 356,287.64 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 180 calendar days.
4.1	The Procuring Entity shall give possession of all parts of the Site to the Contractor upon receipt of the Notice to Proceed.
6	The site investigation reports are: *[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
Office of the City Mayor
QUEZON CITY BIDS & AWARDS COMMITTEE
(QC-BAC-INFRA)

PROJECT : **PROPOSED CONSTRUCTION OF WAITING SHEDS FOR VARIOUS Q.C. BUS STOPS (QUEZON CITY BUS AUGMENTATION PROGRAM) TYPE 1 - STATION WITH DISPATCHING BOOTH PROTOTYPE**

LOCATION : **Quezon City**

SUBJECT : **GENERAL CONDITIONS AND TECHNICAL SPECIFICATIONS**

I. GENERAL CONDITIONS

1.0 DEFINITIONS

a. **OWNER** : LOCAL GOVERNMENT OF QUEZON CITY

b. **CONTRACTOR** : Any individual, form, corporation, partnership or association that enters into an agreement with the Owner for furnishing the materials and/or labor, tools, equipment plant and other facilities required for the erection and completion of the project subject to the accompanying plans and working drawings

c. The Owner/Implementing Agency and the Contractor are treated through the contract documents as if each were of the regular number, masculine gender

1.1 EXAMINATION OF MEMBER

The Contractor shall carefully examine the premises before submitting any bids to enable him to have full knowledge of conditions existing therein.

1.2 LOCATION

The above said Project shall be built at the location stated on the approved Location Plan.

1.3 EXECUTION, CORRELATION & INTENT OF DOCUMENTS

a. The Contract Documents are signed in sufficient number of copies by all parties concerned. In case anybody fails to sign copies of any item forming part of the set contract documents, the Implementing Agency's identification thereon shall suffice

b. The items, specifications and all other documents forming the contract documents are complementary. Anything shown on plans but not mentioned in the specifications or vice versa or anything not expressly set forth in either, but necessarily implied, shall be furnished or done as if specifically shown and mentioned in both, with no extra charge. Where dimensions are given in figures, follow them in preference to measurement by scale

c. Execute work as per agreement, making no changes or deviations whatsoever, without prior permission from the Implementing Agency.

d. The Contractor shall verify and check all dimensions particularly those on the plans. He will be held directly responsible in case of any discrepancy that may be discovered during the progress of work.

1.4 DETAIL DRAWINGS AND INSTRUCTIONS

Plans furnished for use at the jobsite are whenever necessary, supplemented by detail drawings and instructions essential to the proper execution of the work. Such supplementary detail drawings and instructions shall be treated as of equal force as though originally issued.

1.5 PLANS AND PROJECT SITE

Keep at project site, in good order and condition, one (1) set of approved plans, specifications, supplementary detail drawings and instructions

1.6 SHOP DRAWINGS

Shop drawings shall be provided by the Implementing Agency and/or Contractor during the progress of construction The contractor should not place any item subject to shop drawings until the Implementing Agency shall have duly approved such drawings

1.7 CHANGES

The Owner and the Implementing Agency reserve the right to make alterations or additions, including changes during the progress of work. The same shall be carried into effect without in any way deviating from or violating any agreement. Whatever amount shall necessarily be entailed in the cost of labor or materials or both shall be added to or deducted from the original contract price.

1.8 TIME OF COMPLETION AND SCHEDULE OF CONSTRUCTION

The Contractor shall, before actual commencement of the project operations, prepare and submit to the Implementing Agency for verification and approval, a complete and comprehensive work schedule covering the entire duration of construction. He shall also include therein, the estimated number of days within which the entire project shall be completed stage by stage by phase

1.9 WORKMANSHIP

The project shall be executed with the use of first class workmanship to the full intent and meaning of the plans and specifications and to the complete approval and acceptance by the Implementing Agency.

1.10 MATERIALS

All materials to be used shall be the best of their respective types and kind They shall be properly stored and protected from damage or injury.

1.11 SAMPLES

Submit samples as specified and proceed with the work with the use of materials procured based on the samples previously approved by the Implementing Agency.

1.12 INSPECTION OF WORK

The Contractor shall provide the facility for inspecting the work to the Implementing Agency the Owner and other personnel having jurisdiction over the work.

1.13 DEFECTIVE OR IMPROPER WORK

All work or materials not acceptable to the Architect shall be removed immediately and replaced with appropriate work or materials without extra charge All condemned materials shall be taken away from the premises without delay.

1.14 BUILDING LAWS AND REGULATIONS

The Contractor shall be held responsible for strict compliance with existing labor laws and regulations and shall free the Owner from any responsibility in connection therewith, he shall pay on time at his own expense, all taxes, fees and/or licenses due to the government, both national and local arising from his work on the project.

1.15 MANNER OF PAYMENT

Payments to the Contractor shall be based on the periodic work accomplishments subject to verification, approval and recommendation by the Implementing Agency.

1.16 RETENTION MONEY

Progress payments shall be subject to a ten percent (10%) deduction, referred to as retention money. All retained amounts shall be released upon satisfactory completion of the work and issuance of the Certificate of Final Completion and Acceptance.

1.17 TEMPORARY WATER, POWER AND TELEPHONE FACILITIES

The Contractor shall make the necessary arrangements with the local utility companies so as to provide temporary facilities for the supply of water, power and telephone for the duration of construction, and all expenses in connection therewith shall be borne by the Contractor.

1.18 PRIVY

The Contractor shall provide a temporary privy in a most inconspicuous and sanitary manner, and shall have it removed at the termination of the work.

1.19 CLEARING AND CLEANING

Upon its completion, the project and its premises shall be cleared and cleaned as directed by the Implementing Agency, and make ready for immediate occupancy.

1.20 TEMPORARY BARRICADES, SIGNAL LIGHTS, BILLBOARDS, ETC.

The Contractor shall provide all temporary barricades, signal lights, Architect and Contractor's billboards, the required official building billboard, etc., necessary for the protection of the public and for the proper prosecution of the work and display of construction requirements.

1.21 PERFORMANCE AND GUARANTEE BOND

To guarantee the faithful performance of the Contractor under the contract, he shall post a Performance Bond in the amount of thirty percent (30%) of the contract price in the form of cash, manager's check or surety bond, callable on demand.

1.22 QUESTIONS AND DISAGREEMENTS

All questions and disagreements between the Contractor and the Owner relative to the interpretation of the plans and specifications shall be referred to the Implementing Agency whose decision on the matter shall be final.

II. TECHNICAL SPECIFICATIONS

2.0 SITE WORK

WORK INCLUDED

a. Concreting including excavation and re-bars

2.1 DISPOSAL OF EXCESS MATERIALS

Any excess and demolished materials remaining after completion of the earthwork shall be disposed of by hauling and transported out of the premises at the contractor's own expense.

III CONCRETE

3.0 GENERAL

3.0.1 Unless otherwise specified herein, concrete work shall conform to the requirements of ACI Building Code. Full cooperation shall be given other 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.

3.1 SUBMITTALS

3.1.1 Shop Drawings: Reproduction of contract drawings is unacceptable

3.1.2 Shop Drawings for Reinforcing Steel: ACI 318. Indicate bending diagrams, assembly diagrams, splicing and lap of bars, shapes. Dimensions and details of bar reinforcing, accessories and concrete cover. Do not scale dimensions from structural drawings to determine lengths of reinforcing bars.

3.1.3 Contractor Mix Design: Thirty (30) days prior to concrete placement, submit a design for each strength and type of concrete. Furnish a complete list of materials including type, brand, source and amount of cement and admixtures; applicable reference specifications and copies of test reports showing that the mix has been successfully tested to produce concrete with the properties specified and will be suitable for the job conditions. Provide fly ash and pozzolan test results performed within six (6) months of submittal date. Obtain approval before concrete placement.

3.1.4 Certificates of Compliance
- a. Aggregates
- b. Admixtures
- c. Reinforcement
- d. Cement

3.1.5 Catalogue Data
- a. Water stops
- b. Materials for Curing Concrete
- c. Joint Sealant
- d. Joint Filler
- e Vapor Barrier
- f Epoxy Bonding Agents

3.2 MATERIALS

3.2.1 Cement for concrete shall conform to the requirements of specifications for Portland cement (ASTM C-150).

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

3.2.3 Fine Aggregates shall consist of hard, tough, durable uncoated particles. The shape of the particles shall be generally rounded or cubicle and reasonably free from flat or elongated particles. The stipulated percentages of fines in the sand shall be obtained either by processing sand or by the production of suitable graded manufactured sand.

3.2.4 Coarse Aggregates shall consist of gravel. Crushed gravel or rock. Or a combination of gravel and rock. Coarse aggregates shall consist of hard, tough, durable, clean and uncoated particles. The size of coarse aggregates top be used in the various parts of the Work shall be ¾".

3.2.5 Reinforcing bars shall conform to the requirements of ASTM Standard specifications for Billet Steel Bars for concrete reinforcement (A15-625) and to Specification for minimum requirements for the deformed steel bars for concrete reinforcement (A305-56). Tensile strength and grade for all reinforcing bars such as main horizontal (for beams), vertical (for columns), ties, stirrups and inserts shall be as follows:

SCHEDULE OF REINFORCING BARS (PNS-49)

DIAMETER OF BARS	GRADE (fy)
12mmØ & smaller	33 (230mpa)

3.3 PROPORTIONING AND MIXING

3.3.1 Proportioning of all materials entering into the concrete mixture of 3,000 psi concrete shall be as follows

Class	Cement	Sand	Gravel
A	1	2.0	4

3.3.2 Strength of Concrete: Concrete shall have 28-day cylinder strength of 3,000 psi shall be for slab on grade, site pavements and wall footings.

3.3.3 Mixing. Concrete of 3,000 psi compressive strength shall be ready-mixed in transit from batching plant as scheduled order from qualified supplier, ***accredited by Engineer.*** The 3,000 psi concrete can be machine mixed on-site

3.3.4 On-site mixing shall be within 30 minutes after the cement has been added to the aggregates.

3.4 FORMS

3.4.1 General: Forms shall be used whenever necessary to continue the concrete and shape it to the required lines, or to ensure the concrete contamination with materials caving from adjacent excavated surfaces Forms shall have sufficient strength to withstand the pressure resulting from placement and vibration of the concrete, and shall be maintained rigidly in correct position. Forms shall be sufficiently tight to prevent loss of mortar from the concrete Forms for exposed surfaces against which backfill is not to be placed shall be lined with a form grade plywood or metal panels.

3.4.2 Cleaning and Use of Forms: Before placing the concrete, the contact surfaces of the form shall be cleansed of encrustation of mortar, the grout or other foreign material, and shall be coated with commercial form oil that will prevent sticking and will not stain the concrete surfaces

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

3.5 PLACING REINFORCEMENT

General. Steel reinforcement shall be provided as indicated together with all necessary gauge 16 G I. wire ties, 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 of sufficient strength to maintain the operation. The 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.

3.6 CONVEYING AND PLACING CONCRETE

3.6.1 Conveying: Concrete shall be conveyed from mixer to forms as rapidly as practicable, by methods that 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.

3.6.2 Placing: Concrete shall be worked readily into the corners and angles of forms and around all reinforcement and embedded 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 consequent 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

3.6.3 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.

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

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

3.7 CURING

3.7.1 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.

3.7.2 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 wet spraying or intermittent hosing

3.8 FINISHING

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

3.8.2 Concrete slabs on fill: The concrete slabs on fill laid on a prepared foundation consisting of sub-grade and granular fill with thickness equal to the thickness of overlaying slab except as indicated otherwise.

3.9 SURFACE FINISHES

3.9.1 Defects: Repair formed surfaces by removing minor honeycombs pits greater than one square inch surface area or 0.25 inch maximum depth, or otherwise defective areas. Provide edges perpendicular to the surface and patch with non-shrink fegrout Patch the holes and defects when the forms are removed

3.9.2 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.

3.9.3 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

3.9.4 Pavements: Screed the concrete with a template advanced with a combined longitudinal and crosswise motion. Maintain a slight surplus of concrete ahead of the template After screeding, float the concrete longitudinally and refloat as necessary. Obtain final finish be belting. Lay belt flat on the concrete surface and advance with a sawing motion: continue until a uniform but gritty non-slip surface is obtained. Round edges and joints with an edger having a radius of 1/8 inch.

3.9.5 Broomed: Provide for exterior walks, platforms, patios and ramps. Unless otherwise indicated, provide a floated finish, and then finish with a flexible bristle broom. Permit surface to harden sufficiently to retain the scoring or ridges. Broom traverse to traffic or at right angles to the slope of the slab.

3.9.6 Pits and Trenches: Place bottoms and walls monolithically or provide water stops and keys.

3.9.7 Curbs and Gutters: Provide contraction joints spaced at every 10 feet maximum unless otherwise indicated. Cut contraction joints ¼-inch deep with a jointing tool after the surface has been finished. Provide expansion joints ½-inch thick and spaced at every 100 feet maximum unless otherwise indicated. Provide a pavement finish

3.10 MISCELLANEOUS

3.10.1 Construction Joints: Locate joints to least impair strength; continue reinforcement across joints unless otherwise indicated.

3.10.2 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

4.0 METALS WORKS

4.0.1 DESCRIPTION

4.0.1.1 Metal works shall conform to the approved plans and to the Standard Specifications.

4.0.2 REFERENCE STANDARDS

4.0.2.1 Comply with the latest edition of the following as applicable, unless otherwise specified or modified.

4.0.2.1.1 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

4.0.2.1.2 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).

4.0.2.1.3 RESEARCH COUNCIL ON RIVETED AND BOLTED JOINTS OF THE ENGINEERING FOUNDATION (RCRBJ): Specification for Structural Joists using ASTM A-325-76s Bolts.

4.0.2.1.4 STRUCTURAL STEEL PAINTING COUNCIL (SSPC): Painting Manual, Vol. 1; Good Painting Practice, Painting Manual, Vol. 2; Systems and Specifications

4.0.3 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.

4.0.4 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.

4.0.5 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.

4.0.6 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

4.0.7 MATERIALS

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

4.0.7.1 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.

4.0.7.2 BOLTS, NUTS, STUDS AND RIVETS: ASTM A 325

4.0.7.3 SCREWS: Fed. Spec FF-S-85, Fed Spec. FF-S-92, and Fed. Spec. FF-S-111

4.0.8 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.

4.0.9 MEASUREMENTS

Before fabrication, provide necessary field measurements and verify all measurements

4.0.10 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.

4.0.11 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.

4.0.12 SHOP FABRICATION

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

4.0.13 SUBMITTALS

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

4.0.14 QUALIFICATION OF WELDERS

In accordance with AWS D1.1using procedures, materials and equipment of the type required for the work.

4.0.15 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.

4.0.16 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

4.1 METAL PURLINS

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

V ARCHITECTURAL

5.0 ROOFING WORKS

a Aluminum Composite Panel Cladding, 4mm thk, nano finish.

5.1 PAINTING

1. 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.

2 Concrete walls shall be treated with neutralizers. Exterior walls without wall veneer shall be applied with a primer before final coat In general, rough surfaces of concrete, cabinets and woodworks surfaces shall be properly sandpapered and puffied before any application of paint

a. Epoxy Paint Finish (steel members)

5.2 WATERPROOFING AND DAMP-PROOFING

a Toilets Cementitious capillary type waterproofing.

5.3 OTHER FINISHES

a QC Logo
b City Bus Logo
c. 200mm Station Number and Location Reflective Signage
d. Fabrication and Installation of Dispatch Booth including accessories

5.4 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.

VI ELECTRICAL WORKS

6.0 WORK INCLUDED

6 0.0 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 of the said Project stated of the above title and located imposed on the location plan in accordance with this specification and accompanying drawings of materials and finishes

6.0.1 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.

6.0 2 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.

6.1 CODES, NSPECTIONS, PERMITS AND FEES

6 1.1 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

6.1 2 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

6.2 TEST

6 2.1 The electrical contractor shall apply such test, replace or remedy all defective work and adjust such system as needed or as the Architect or the owner shall direct. He shall also instruct the proper use of the system and equipment to persons designated by the owner

6.3 MEASUREMENTS

6.3.1 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

6.4 SLEEVES AND FORMS FOR OPENINGS

6.4.1 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.

6.5 LOCATION OF OUTLETS

6.5.1 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.

6.6 GROUNDINGS

6.6.1 All metallic conduits, supports, cabinets and equipment shall be properly grounded and bonded by means of copper straps. The conduits of such system shall be grounded by connecting to the grounding rod.

6.6.2 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.

6.7 WIRING METHODS

6.7.1 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.

6.8 GUARANTEE

6.8.1 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.

6.8.2 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

6.9 MATERIALS

6.9.1 All materials shall be new and shall conform to the standards of *Underwriter's Laboratories, Inc.*

6.9.2 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.

6.9.3 Materials sample shall be submitted for approval as required by the Architect and Electrical Engineer.

6.10 WIRES

6.10.1 All wires shall be copper, soft drawned 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.

6.10.2 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.

6.10.3 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.

6.10.4 For lighting and power system, no wire smaller than 3.5mm² shall be used except for control leads/ grounding wire.

6.10.5 All wires and cables shall be manufactured by a reliable manufacturing company acceptable to the Electrical Engineer of the owner

6.11 CONDUITS

6.11.1 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, any brand acceptable to the Electrical Engineer of the Owner.

7.11.0 Polyvinyl 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

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.

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

6.11.3 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

6.11 4 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

6.11 5 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

6.12 OUTLET BOXES AND FITTINGS

6.12.1 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.

6 12.2 The Contractor shall consult with the Electrical Engineer as to the nature of various fittings 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

6 12 3 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

6.13 SWITCHES

6.13.1 Local lighting switches shall be flush type, heavy duty, 15- ampere size 250 volts, bakelite case, quick connect terminal, or approved equal. 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.

6.14 RECEPTACLES

6 14 1 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 shall be provided

6.15 PLATES

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

6.16 SWITCH GEAR, PANEL BOARDS AND CABINETS

6 16.1 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.

6 16 2 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

6.16.3 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.

6.16.4 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

6.16.5 All circuit breakers with frame size above 100AT shall have minimum interrupting capacity of 22 KAIC at 230 volts and frame size 70AT and below shall have minimum interrupting capacity of 18 KAIC at 230 volts All circuit breakers shal. 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.

6 16.6 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.

6.16.7 Cardholder on inside of door with clear plastic cover and complete typewritten schedule of panel branch circuit shall be provided. Leave spare circuit blank.

6.16.8 Submit samples and or product description of panel board to be used for approval prior to ordering and installation.

6.17 ELECTRIC SERVICE

6.17.1 The electric service shall be three (1)-phase, 3 wires + 1 - ground, 230volts, 60 hertz. The sizes of service entrance conductor and conduit are shown in the plans.

6 17 2 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.

6.18 LIGHTING SYSTEM

6 18.1 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.

6.18.2 All wiring shall be installed in conduits, and in general shall be concealed. Buried underground in concrete encasement and/or embedded in concrete

6.18.3 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	- 1.4 above finish floor line
Receptacles	- 0.3 above finish floor line

6.19 DISTRIBUTION FEEDERS

6 19.1 Distribution voltage shall be 230volts, three (1)-phase, 3 wires + 1 - ground 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

6.20 CONNECTORS AND INSULATION

6.20 1 Use solderless mechanical pressure type lugs, copper connectors for splicing wires greater than no 8mm.sq All splices shall be properly insulated using #M brand 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.

6.21 BRANCH CIRCUITS

6.21 1 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.

6.22 MOTOR CONNECTIONS

6.22 1 Connect the motor starting devices for all motors, except where 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.

6.22 2 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

6.22.3 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.

6.23 RECORD DRAWINGS AND AS BUILT PLANS

6.23.1 The Electrical Contractor shall keep an active record of the actual installation works during the progress job. The 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

6 23.2 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

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.***

Republic of the Philippines
Quezon City
Office of the City Mayor

QUEZON CITY BIDS & AWARDS COMMITTEE
(QC-BAC-INFRA)

PROJECT : **PROPOSED CONSTRUCTION OF WAITING SHEDS FOR VARIOUS Q.C. BUS STOPS (QUEZON CITY BUS AUGMENTATION PROGRAM) TYPE 2 - BUS STOP INFORMATION STAND AND BENCH**

LOCATION : **Quezon City**

SUBJECT : **GENERAL CONDITIONS AND TECHNICAL SPECIFICATIONS**

I. GENERAL CONDITIONS

1.0 DEFINITIONS

a. **OWNER** : **LOCAL GOVERNMENT OF QUEZON CITY**

b. **CONTRACTOR** : Any individual, form, corporation, partnership or association that enters into an agreement with the Owner for furnishing the materials and/or labor, tools, equipment plant and other facilities required for the erection and completion of the project subject to the accompanying plans and working drawings.

c. The Owner/Implementing Agency and the Contractor are treated through the contract documents as if each were of the regular number masculine gender

1.1 EXAMINATION OF MEMBER

The Contractor shall carefully examine the premises before submitting any bids to enable him to have full knowledge of conditions existing therein.

1.2 LOCATION

The above said Project shall be built at the location stated on the approved Location Plan.

1.3 EXECUTION, CORRELATION & INTENT OF DOCUMENTS

a. The Contract Documents are signed in sufficient number of copies by all parties concerned. In case anybody fails to sign copies of any item forming part of the set contract documents, the Implementing Agency's identification thereon shall suffice.

b. The items, specifications and all other documents forming the contract documents are complementary. Anything shown on plans but not mentioned in the specifications or vice versa or anything not expressly set forth in either, but necessarily implied, shall be furnished or done as if specifically shown and mentioned in both, with no extra charge. Where dimensions are given in figures, follow them in preference to measurement by scale.

c. Execute work as per agreement, making no changes or deviations whatsoever, without prior permission from the Implementing Agency

d. The Contractor shall verify and check all dimensions particularly those on the plans. He will be held directly responsible in case of any discrepancy that may be discovered during the progress of work.

1.4 DETAIL DRAWINGS AND INSTRUCTIONS

Plans furnished for use at the jobsite are whenever necessary, supplemented by detail drawings and instructions essential to the proper execution of the work. Such supplementary detail drawings and instructions shall be treated as of equal force as though originally issued

1.5 PLANS AND PROJECT SITE

Keep at project site in good order and condition, one (1) set of approved plans, specifications, supplementary detail drawings and instructions.

1.6 SHOP DRAWINGS

Shop drawings shall be provided by the Implementing Agency and/or Contractor during the progress of construction. The contractor should not place any item subject to shop drawings until the Implementing Agency shall have duly approved such drawings

1.7 CHANGES

The Owner and the Implementing Agency reserve the right to make alterations or additions including changes during the progress of work. The same shall be carried into effect without in any way deviating from or violating any agreement. Whatever amount shall necessarily be entailed in the cost of labor or materials or both shall be added to or deducted from the original contract price.

1.8 TIME OF COMPLETION AND SCHEDULE OF CONSTRUCTION

The Contractor shall, before actual commencement of the project operations, prepare and submit to the Implementing Agency for verification and approval, a complete and comprehensive work schedule covering the entire duration of construction. He shall also include therein, the estimated number of days within which the entire project shall be completed stage by stage by phase.

1.9 WORKMANSHIP

The project shall be executed with the use of first class workmanship to the full intent and meaning of the plans and specifications and to the complete approval and acceptance by the Implementing Agency.

1.10 MATERIALS

All materials to be used shall be the best of their respective types and kind. They shall be properly stored and protected from damage or injury

1.11 SAMPLES

Submit samples as specified and proceed with the work with the use of materials procured based on the samples previously approved by the Implementing Agency.

1.12 INSPECTION OF WORK

The Contractor shall provide the facility for inspecting the work to the Implementing Agency, the Owner and other personnel having jurisdiction over the work.

1.13 DEFECTIVE OR IMPROPER WORK

All work or materials not acceptable to the Architect shall be removed immediately and replaced with appropriate work or materials without extra charge. All condemned materials shall be taken away from the premises without delay.

1.14 BUILDING LAWS AND REGULATIONS

The Contractor shall be held responsible for strict compliance with existing labor laws and regulations and shall free the Owner from any responsibility in connection therewith he shall pay on time at his own expense, all taxes, fees and/or licenses due to the government both national and local arising from his work on the project.

1.15 MANNER OF PAYMENT

Payments to the Contractor shall be based on the periodic work accomplishments subject to verification, approval and recommendation by the Implementing Agency

1.16 RETENTION MONEY

Progress payments shall be subject to a ten percent (10%) deduction, referred to as retention money. All retained amounts shall be released upon satisfactory completion of the work and issuance of the Certificate of Final Completion and Acceptance.

1.17 TEMPORARY WATER, POWER AND TELEPHONE FACILITIES

The Contractor shall make the necessary arrangements with the local utility companies so as to provide temporary facilities for the supply of water power and telephone for the duration of construction, and all expenses in connection therewith shall be borne by the Contractor.

1.18 PRIVY

The Contractor shall provide a temporary privy in a most inconspicuous and sanitary manner and shall have it removed at the termination of the work.

1.19 CLEARING AND CLEANING

Upon its completion, the project and its premises shall be cleared and cleaned as directed by the Implementing Agency, and make ready for immediate occupancy.

1.20 TEMPORARY BARRICADES, SIGNAL LIGHTS, BILLBOARDS, ETC.

The Contractor shall provide all temporary barricades, signal lights, Architect and Contractor's billboards, the required official building billboard, etc. necessary for the protection of the public and for the proper prosecution of the work and display of construction requirements.

1.21 PERFORMANCE AND GUARANTEE BOND

To guarantee the faithful performance of the Contractor under the contract, he shall post a Performance Bond in the amount of thirty percent (30%) of the contract price in the form of cash, manager's check or surety bond, callable on demand.

1.22 QUESTIONS AND DISAGREEMENTS

All questions and disagreements between the Contractor and the Owner relative to the interpretation of the plans and specifications shall be referred to the Implementing Agency whose decision on the matter shall be final.

V ARCHITECTURAL

5.1 OTHER FINISHES

a. QC Logo
b. City Bus Logo.
c Fabrication and Installation of Dispatch Booth including accessories
d. Fabrication and Installation of Stainless Steel Flat Desk including framing and accessories
e. Aluminum Composite Panel Cladding, 4mm thk, nano finish including framing and accessories
f 600mm x 1.10m QC Bus Info Map including acrylic, backlit, framing and accessories
g. Stainless Steel Panel including framing and accessories

5.2 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

VI ELECTRICAL WORKS

6.0 WORK INCLUDED

6.0.0 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 of the said Project stated of the above title and located imposed on the location plan in accordance with this specification and accompanying drawings of materials and finishes.

6.0 1 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.

6.0.2 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.

6.1 CODES, NSPECTIONS, PERMITS AND FEES

6.1.1 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

6.1.2 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

6.2 TEST

6.2.1 The electrical contractor shall apply such test, replace or remedy all defective work and adjust such system as needed or as the Architect or the owner shall direct. He shall also instruct the proper use of the system and equipment to persons designated by the owner

6.3 MEASUREMENTS

6.3.1 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

6.4 SLEEVES AND FORMS FOR OPENINGS

6.4.1 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.

6.5 LOCATION OF OUTLETS

6 5.1 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

6.6 GROUNDINGS

6.6.1 All metallic conduits, supports, cabinets and equipment shall be properly grounded and bonded by means of copper straps. The conduits of such system shall be grounded by connecting to the grounding rod.

6.6.2 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.

6.7 WIRING METHODS

6.7.1 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.

6.8 GUARANTEE

6.8.1 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.

6.8.2 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.

6.9 MATERIALS

6.9.1 All materials shall be new and shall conform to the standards of *Underwriter's Laboratories, Inc.*

6.9.2 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.

6.9.3 Materials sample shall be submitted for approval as required by the Architect and Electrical Engineer.

6.10 WIRES

6.10.1 All wires shall be copper, soft drawned 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

6.10.2 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.

6.10.3 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.

6.10.4 For lighting and power system, no wire smaller than 3.5mm² shall be used except for control leads/ grounding wire.

6.10.5 All wires and cables shall be manufactured by a reliable manufacturing company acceptable to the Electrical Engineer of the owner.

6.11 CONDUITS

6.11.1 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, any brand acceptable to the Electrical Engineer of the Owner

7.11.0 Polyvinyl 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.

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.

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

6.11.3 No conduits shall be used in any system smaller than 15-mm electrical trade size, nor shall have more than four 90 degrees' bend in any one run, and where necessary, hand hole and pull boxes shall be provided.

6.11 4 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

6.11.5 The ends of all conduits shall be lightly plugged to exclude plaster dust sand and soil including moisture while the renovation of the perimeter is in the process

6.12 OUTLET BOXES AND FITTINGS

6 12.1 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.

6.12 2 The Contractor shall consult with the Electrical Engineer as to the nature of various fittings 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

6.12 3 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

6.13 SWITCHES

6 13 1 Local lighting switches shall be flush type, heavy duty, 15- ampere size 250 volts, bakelite case, quick connect terminal, or approved equal, 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

6.14 RECEPTACLES

6 14.1 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 shall be provided

6.15 PLATES

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

6.16 SWITCH GEAR, PANEL BOARDS AND CABINETS

6.16 1 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 winngs with terminal block connection for external leads

6 16.2 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.

6.16.3 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

6.16.4 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

6.16.5 All circuit breakers with frame size above 100AT shall have minimum interrupting capacity of 22 KAIC at 230 volts and frame size 70AT and below shall have minimum interrupting capacity of 18 KAIC at 230 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.

6 16 6 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

6.16.7 Cardholder on inside of door with clear plastic cover and complete typewritten schedule of panel branch circuit shall be provided. Leave spare circuit blank.

6.16.8 Submit samples and or product description of panel board to be used for approval prior to ordering and installation

6.17 ELECTRIC SERVICE

6.17.1 The electric service shall be three (1)-phase, 3 wires + 1 - ground, 230volts, 60 hertz. The sizes of service entrance conductor and conduit are shown in the plans

6.17.2 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

6.18 LIGHTING SYSTEM

6.18.1 The lighting system shall be complete in every respect as indicated on the electrical plans or as specified in the Architectural plans. Exact fixture locaton shall be determined.

6.18.2 All wiring shall be installed in conduits, and in general shall be concealed. Buried underground in concrete encasement and/or embedded in concrete

6.18.3 Mounting herght of devices shall be as indicated in the plans and/or subject to Architect's approval prior to installations as follows

Local switches	- 1.4 above finish floor line
Receptacles	- 0.3 above finish floor line

6.19 DISTRIBUTION FEEDERS

6 19 1 Distribution voltage shall be 230volts, three (1)-phase, 3 wires + 1 - ground. 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.

6.20 CONNECTORS AND INSULATION

6.20.1 Use solderless mechanical pressure type lugs, copper connectors for splicing wires greater than no 8mm.sq. All splices shall be properly insulated using #M brand 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.

6.21 BRANCH CIRCUITS

6 21 1 The drawings ind cate 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.

6.22 MOTOR CONNECTIONS

6 22.1 Connect the motor starting devices for all motors. except where 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.

6.22.2 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.

6.22 3 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.

6.23 RECORD DRAWINGS AND AS BUILT PLANS

6.23.1 The Electrical Contractor shall keep an active record of the actual installation works during the progress job. The 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.

6.23.2 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.

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.***

Republic of the Philippines
Quezon City
Office of the City Mayor
QUEZON CITY BIDS & AWARDS COMMITTEE
(QC-BAC-INFRA)

PROJECT : **PROPOSED CONSTRUCTION OF WAITING SHEDS FOR VARIOUS Q.C. BUS STOPS (QUEZON CITY BUS AUGMENTATION PROGRAM) TYPE 3 - MINOR BUS STOP PROTOTYPE**

LOCATION : **Quezon City**

SUBJECT : **GENERAL CONDITIONS AND TECHNICAL SPECIFICATIONS**

I. GENERAL CONDITIONS

1.0 DEFINITIONS

a. **OWNER** : **LOCAL GOVERNMENT OF QUEZON CITY**

b. **CONTRACTOR** : Any individual, form, corporation, partnership or association that enters into an agreement with the Owner for furnishing the materials and/or labor, tools, equipment, plant and other facilities required for the erection and completion of the project subject to the accompanying plans and working drawings.

c. The Owner/Implementing Agency and the Contractor are treated through the contract documents as if each were of the regular number, masculine gender.

1.1 EXAMINATION OF MEMBER

The Contractor shall carefully examine the premises before submitting any bids to enable him to have full knowledge of conditions existing therein.

1.2 LOCATION

The above said Project shall be built at the location stated on the approved Location Plan.

1.3 EXECUTION, CORRELATION & INTENT OF DOCUMENTS

a. The Contract Documents are signed in sufficient number of copies by all parties concerned. In case anybody fails to sign copies of any item forming part of the set contract documents, the Implementing Agency's identification thereon shall suffice.

b. The items, specifications and all other documents forming the contract documents are complementary. Anything shown on plans but not mentioned in the specifications or vice versa or anything not expressly set forth in either, but necessarily implied, shall be furnished or done as if specifically shown and mentioned in both, with no extra charge. Where dimensions are given in figures, follow them in preference to measurement by scale.

c. Execute work as per agreement, making no changes or deviations whatsoever, without prior permission from the Implementing Agency.

d. The Contractor shall verify and check all dimensions particularly those on the plans. He will be held directly responsible in case of any discrepancy that may be discovered during the progress of work.

1.4 DETAIL DRAWINGS AND INSTRUCTIONS

Plans furnished for use at the jobsite are whenever necessary, supplemented by detail drawings and instructions essential to the proper execution of the work. Such supplementary detail drawings and instructions shall be treated as of equal force as though originally issued.

1.5 PLANS AND PROJECT SITE

Keep at project site, in good order and condition, one (1) set of approved plans, specifications, supplementary detail drawings and instructions

1.6 SHOP DRAWINGS

Shop drawings shall be provided by the Implementing Agency and/or Contractor during the progress of construction. The contractor should not place any item subject to shop drawings until the Implementing Agency shall have duly approved such drawings

1.7 CHANGES

The Owner and the Implementing Agency reserve the right to make alterations or additions, including changes during the progress of work. The same shall be carried into effect without in any way deviating from or violating any agreement. Whatever amount shall necessarily be entailed in the cost of labor or materials or both shall be added to or deducted from the original contract price

1.8 TIME OF COMPLETION AND SCHEDULE OF CONSTRUCTION

The Contractor shall, before actual commencement of the project operations, prepare and submit to the Implementing Agency for verification and approval, a complete and comprehensive work schedule covering the entire duration of construction. He shall also include therein, the estimated number of days within which the entire project shall be completed stage by stage by phase.

1.9 WORKMANSHIP

The project shall be executed with the use of first class workmanship to the full intent and meaning of the plans and specifications and to the complete approval and acceptance by the Implementing Agency

1.10 MATERIALS

All materials to be used shall be the best of their respective types and kind. They shall be properly stored and protected from damage or injury.

1.11 SAMPLES

Submit samples as specified and proceed with the work with the use of materials procured based on the samples previously approved by the Implementing Agency

1.12 INSPECTION OF WORK

The Contractor shall provide the facility for inspecting the work to the Implementing Agency, the Owner and other personnel having jurisdiction over the work.

1.13 DEFECTIVE OR IMPROPER WORK

All work or materials not acceptable to the Architect shall be removed immediately and replaced with appropriate work or materials without extra charge. All condemned materials shall be taken away from the premises without delay.

1.14 BUILDING LAWS AND REGULATIONS

The Contractor shall be held responsible for strict compliance with existing labor laws and regulations and shall free the Owner from any responsibility in connection therewith. he shall pay on time at his own expense, all taxes, fees and/or licenses due to the government, both national and local arising from his work on the project.

1.15 MANNER OF PAYMENT

Payments to the Contractor shall be based on the periodic work accomplishments subject to verification, approval and recommendation by the Implementing Agency

1.16 RETENTION MONEY

Progress payments shall be subject to a ten percent (10%) deduction, referred to as retention money. All retained amounts shall be released upon satisfactory completion of the work and issuance of the Certificate of Final Completion and Acceptance.

1.17 TEMPORARY WATER, POWER AND TELEPHONE FACILITIES

The Contractor shall make the necessary arrangements with the local utility companies so as to provide temporary facilities for the supply of water, power and telephone for the duration of construction, and all expenses in connection therewith shall be borne by the Contractor.

1.18 PRIVY

The Contractor shall provide a temporary privy in a most inconspicuous and sanitary manner, and shall have it removed at the termination of the work

1.19 CLEARING AND CLEANING

Upon its completion, the project and its premises shall be cleared and cleaned as directed by the Implementing Agency, and make ready for immediate occupancy.

1.20 TEMPORARY BARRICADES, SIGNAL LIGHTS, BILLBOARDS, ETC.

The Contractor shall provide all temporary barricades signal lights, Architect and Contractor's billboards, the required official building billboard, etc., necessary for the protection of the public and for the proper prosecution of the work and display of construction requirements

1.21 PERFORMANCE AND GUARANTEE BOND

To guarantee the faithful performance of the Contractor under the contract, he shall post a Performance Bond in the amount of thirty percent (30%) of the contract price in the form of cash, manager's check or surety bond, callable on demand

1.22 QUESTIONS AND DISAGREEMENTS

All questions and disagreements between the Contractor and the Owner relative to the interpretation of the plans and specifications shall be referred to the Implementing Agency whose decision on the matter shall be final.

II. TECHNICAL SPECIFICATIONS

2.0 SITE WORK

WORK INCLUDED

2.0.1 Demolition Works: Chipping of existing tiles, Concrete Breaking, Hauling and disposal of demolished materials

2.1 DISPOSAL OF EXCESS MATERIALS

Any excess and demolished materials remaining after completion of the earthwork shall be disposed of by hauling and transported out of the premises at the contractor's own expense.

III CONCRETE

3.0 GENERAL

3.0 1 Unless otherwise specified herein, concrete work shall conform to the requirements of ACI Building Code. Full cooperation shall be given other 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.

3.1 SUBMITTALS

3.1.1 Shop Drawings: Reproduction of contract drawings is unacceptable.

3 1 2 Shop Drawings for Reinforcing Steel. ACI 318 Indicate bending diagrams, assembly diagrams, splicing and lap of bars, shapes. Dimensions and details of bar reinforcing, accessories and concrete cover Do not scale dimensions from structural drawings to determine lengths of reinforcing bars

3 1 3 Contractor Mix Design: Thirty (30) days prior to concrete placement, submit a design for each strength and type of concrete Furnish a complete list of materials including type, brand, source and amount of cement and admixtures; applicable reference specifications and copies of test reports showing that the mix has been successfully tested to produce concrete with the properties specified and will be suitable for the job conditions Provide fly ash and pozzolan test results performed within six (6) months of submittal date. Obtain approval before concrete placement.

3.1 4 Certificates of Compliance
- a. Aggregates
- b. Admixtures
- c. Reinforcement
- d Cement

3.1 5 Catalogue Data
- a. Water stops
- b. Materials for Curing Concrete
- c. Joint Sealant
- d Joint Filler
- e Vapor Barrier
- f Epoxy Bonding Agents

3.2 MATERIALS

3 2 1 Cement for concrete shall conform to the requirements of specifications for Portland cement (ASTM C-150).

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

3.2 3 Fine Aggregates shall consist of hard, tough, durable uncoated particles. The shape of the particles shall be generally rounded or cubicle and reasonably free from flat or elongated particles. The stipulated percentages of fines in the sand shall be obtained either by processing sand or by the production of suitable graded manufactured sand

3.2 4 Coarse Aggregates shall consist of gravel Crushed gravel or rock Or a combination of gravel and rock. Coarse aggregates shall consist of hard, tough, durable, clean and uncoated particles The size of coarse aggregates top be used in the various parts of the Work shall be ¾".

3.2 5 Reinforcing bars shall conform to the requirements of ASTM Standard specifications for Billet Steel Bars for concrete reinforcement (A15-625) and to Specification for minimum requirements for the deformed steel bars for concrete reinforcement (A305-56). Tensile strength and grade for all reinforcing bars such as main horizontal (for beams), vertical (for columns), ties, stirrups and inserts shall be as follows:

SCHEDULE OF REINFORCING BARS (PNS-49)

DIAMETER OF BARS	GRADE (fy)
12mmØ & smaller	33 (230mpa)

3.3 PROPORTIONING AND MIXING

3.3.1 Proportioning of all materials entering into the concrete mixture of 3 000 psi concrete shall be as follows:

Class	Cement	Sand	Gravel
A	1	2.0	4

3.3 2 Strength of Concrete. Concrete shall have 28-day cylinder strength of 3 000 psi shall be for slab on grade, site pavements and wall footings

3.3.3 Mixing. Concrete of 3,000 psi compressive strength shall be ready-mixed in transit from batching plant as scheduled order from qualified supplier, ***accredited by Engineer***. The 3,000 psi concrete can be machine mixed on-site.

3 3.4 On-site mixing shall be within 30 minutes after the cement has been added to the aggregates

3.4 FORMS

3 4 1 General: Forms shall be used whenever necessary to continue the concrete and shape it to the required lines, or to ensure the concrete contamination with materials caving from adjacent excavated surfaces Forms shall have sufficient strength to withstand the pressure resulting from placement and vibration of the concrete, and shall be maintained rigidly in correct position. Forms shall be sufficiently tight to prevent loss of mortar from the concrete Forms for exposed surfaces against which backfill is not to be placed shall be lined with a form grade plywood or metal panels.

3.4.2 Cleaning and Use of Forms: Before placing the concrete, the contact surfaces of the form shall be cleansed of encrustation of mortar the grout or other foreign material, and shall be coated with commercial form oil that will prevent sticking and will not stain the concrete surfaces.

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

3.5 PLACING REINFORCEMENT

General Steel reinforcement shall be provided as indicated, together with all necessary gauge 16 G.I wire ties, 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 of sufficient strength to maintain the operation The 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.

3.6 CONVEYING AND PLACING CONCRETE

3.6.1 Conveying: Concrete shall be conveyed from mixer to forms as rapidly as practicable. by methods that 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

3 6 2 Placing: Concrete shall be worked readily into the corners and angles of forms and around all reinforcement and embedded items without permitting the material to segregate Concrete shall be deposited as close as possible to its final posiion in the forms so that flow within the mass does not exceed two (2) meters and consequent 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.

3 6.3 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

3.6 4 Consolidation of concrete: Concrete shall be consolidated with the aid of mechanical vibrating equipment and supplemented by hand spading and tamping. Vibrators shall not be inserted into lower coursed that have commenced initial set and reinforcement embedded in concrete beginning to set or already set shall not be disturbed by vibrators. Consolidation around major embedded parts shall be by hand spading and tamping and vibrators shall not be used.

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

3.7 CURING

3 7.1 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

3 7.2 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 wet spraying or intermittent hosing.

3.8 FINISHING

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

3 8 2 Concrete slabs on fill: The concrete slabs on fill laid on a prepared foundation consisting of sub-grade and granular fill with thickness equal to the thickness of overlaying slab except as indicated otherwise.

3.9 SURFACE FINISHES

3 9.1 Defects: Repair formed surfaces by removing minor honeycombs, pits greater than one square inch surface area or 0.25 inch maximum depth, or otherwise defective areas Provide edges perpendicular to the surface and patch with non-shrink f=grout. Patch the holes and defects when the forms are removed.

3 9.2 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

3.9.3 Finish. Place, consolidate and immediately strike-off concrete to obtain proper contour, grade and elevation A aet sufficient for floating and supporting the weight of the finisher and equipment

3 9 4 Pavements: Screed the concrete with a template advanced with a combined longitudinal and crosswise motion. Maintain a slight surplus of concrete ahead of the template. After screeding float the concrete longitudinally and refloat as necessary. Obtain final finish be belting. Lay belt flat on the concrete surface and advance with a sawing motion; continue until a uniform but gritty non-slip surface is obtained. Round edges and joints with an edger having a radius of 1/8 inch.

3.9.5 Broomed: Provide for exterior walks, platforms, patios and ramps. Unless otherwise indicated, provide a floated finish, and then finish with a flexible bristle broom. Permit surface to harden sufficiently to retain the scoring or ridges. Broom traverse to traffic or at right angles to the slope of the slab.

3.9.6 Pits and Trenches: Place bottoms and walls monolithically or provide water stops and keys.

3.9.7 Curbs and Gutters: Provide contraction joints spaced at every 10 feet maximum unless otherwise indicated. Cut contraction joints ¼-inch deep with a jointing tool after the surface has been finished. Provide expansion joints ½-inch thick and spaced at every 100 feet maximum unless otherwise indicated. Provide a pavement finish.

3.10 MISCELLANEOUS

3.10.1 Construction Joints: Locate joints to least impair strength, continue reinforcement across joints unless otherwise indicated.

3.10.2 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.

4.0 METALS WORKS

4.0.1 DESCRIPTION

4.0.1.1 Metal works shall conform to the approved plans and to the Standard Specifications.

4.0.2 REFERENCE STANDARDS

4.0.2.1 Comply with the latest edition of the following as applicable unless otherwise specified or modified.

4.0.2.1.1 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.

4.0.2.1.2 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).

4.0.2.1.3 RESEARCH COUNCIL ON RIVETED AND BOLTED JOINTS OF THE ENGINEERING FOUNDATION (RCRBJ): Specification for Structural Joints using ASTM A-325-78s Bolts.

4.0.2.1.4 STRUCTURAL STEEL PAINTING COUNCIL (SSPC): Painting Manual, Vol. 1 Good Painting Practice. Painting Manual, Vol. 2; Systems and Specifications.

4.0.3 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.

4.0.4 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, pellets or other supports and protect from harmful elements.

4.0.5 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.

4.0.6 FIELD QUALITY CONTROL

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

4.0.7 MATERIALS

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

4.0.7.1 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.

4.0.7.2 BOLTS, NUTS, STUDS AND RIVETS, ASTM A 325

4.0.7.3 SCREWS: Fed. Spec FF-S-85. Fed. Spec FF-S-92. and Fed Spec. FF-S-111

4.0.8 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.

4.0.9 MEASUREMENTS

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

4.0.10 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

4.0.11 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

4.0.12 SHOP FABRICATION

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

4.0.13 SUBMITTALS

Shop Drawings Submit along with catalogue, cuts, templates, and erection and installation details, indicating thickness, type, grade, class of metal and dimensions. Show construction details, reinforcement, anchorage, and installation with relation to the construction

4.0.14 QUALIFICATION OF WELDERS

In accordance with AWS D1.1using procedures, materials and equipment of the type required for the work.

4.0.15 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

4.0.16 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

4.1 METAL PURLINS

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

V ARCHITECTURAL

5.0 ROOFING WORKS

a. Aluminum Composite Panel Cladding, 4mm thk. nano finish.

5.1 PAINTING

1 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

2. Concrete walls shall be treated with neutralizers. Exterior walls without wall veneer shall be applied with a primer before final coat. In general, rough surfaces of concrete, cabinets and woodworks surfaces shall be properly sandpapered and puffied before any application of paint.

a Epoxy Paint Finish (steel members)

5.2 WATERPROOFING AND DAMP-PROOFING

a. Toilets Cementitious capillary type waterproofing.

5.3 OTHER FINISHES

a. QC Logo
b. City Bus Logo
c. 200mm Station Number and Location Reflective Signage

5.4 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.

VI ELECTRICAL WORKS

6.0 WORK INCLUDED

6.0.0 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 of the said Project stated of the above title and located imposed on the location plan in accordance with this specification and accompanying drawings of materials and finishes.

6.0.1 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.

6.0.2 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.

6.1 CODES, NSPECTIONS, PERMITS AND FEES

6.1.1 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.

6.1.2 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.

6.2 TEST

6.2.1 The electrical contractor shall apply such test, replace or remedy all defective work and adjust such system as needed or as the Architect or the owner shall direct. He shall also instruct the proper use of the system and equipment to persons designated by the owner.

6.3 MEASUREMENTS

6.3.1 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.

6.4 SLEEVES AND FORMS FOR OPENINGS

6.4.1 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.

6.5 LOCATION OF OUTLETS

6.5.1 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.

6.6 GROUNDINGS

6.6.1 All metallic conduits, supports, cabinets and equipment shall be properly grounded and bonded by means of copper straps. The conduits of such system shall be grounded by connecting to the grounding rod

6.6.2 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.

6.7 WIRING METHODS

6.7.1 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.

6.8 GUARANTEE

6.8.1 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.

6.8.2 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

6.9 MATERIALS

6.9.1 All materials shall be new and shall conform to the standards of *Underwriter's Laboratories, Inc*

6.9.2 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

6.9.3 Materials sample shall be submitted for approval as required by the Architect and Electrical Engineer

6.10 WIRES

6.10.1 All wires shall be copper, soft drawned 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

6.10.2 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.

6.10.3 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

6.10.4 For lighting and power system, no wire smaller than 3.5mm² shall be used except for control leads/ grounding wire.

6.10.5 All wires and cables shall be manufactured by a reliable manufacturing company acceptable to the Electrical Engineer of the owner.

6.11 CONDUITS

6.11.1 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, any brand acceptable to the Electrical Engineer of the Owner.

7 11 0 Polyvinyl 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

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

6.11 2 All conduits shall be of true cylindrical form and shall be within the actual size called for.

6.11.3 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.

6.11.4 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.

6 11 5 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

6.12 OUTLET BOXES AND FITTINGS

6.12.1 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.

6.12 2 The Contractor shall consult with the Electrical Engineer as to the nature of various fittings 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

6.12.3 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

6.13 SWITCHES

6.13.1 Local lighting switches shall be flush type, heavy duty, 15- ampere size 250 volts, bakelite case, quick connect terminal, or approved equal. 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.

6.14 RECEPTACLES

6 14.1 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 shall be provided

6.15 PLATES

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

6.16 SWITCH GEAR, PANEL BOARDS AND CABINETS

6.16.1 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.

6.16.2 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.

6.16.3 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.

6.16.4 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.

6.16.5 All circuit breakers with frame size above 100AT shall have minimum interrupting capacity of 22 KAIC at 230 volts and frame size 70AT and below shall have minimum interrupting capacity of 18 KAIC at 230 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.

6.16.6 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.

6.16.7 Cardholder on inside of door with clear plastic cover and complete typewritten schedule of panel branch circuit shall be provided. Leave spare circuit blank.

6.16.8 Submit samples and or product description of panel board to be used for approval prior to ordering and installation.

6.17 ELECTRIC SERVICE

6.17.1 The electric service shall be three (1)-phase, 3 wires + 1 - ground, 230volts, 60 hertz. The sizes of service entrance conductor and conduit are shown in the plans.

6.17.2 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.

6.18 LIGHTING SYSTEM

6.18.1 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.

6.18.2 All wiring shall be installed in conduits, and in general shall be concealed. Buried underground in concrete encasement and/or embedded in concrete.

6.18.3 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	- 1.4 above finish floor line
Receptacles	- 0.3 above finish floor line

6.19 DISTRIBUTION FEEDERS

6.19.1 Distribution voltage shall be 230volts, three (1)-phase, 3 wires + 1 - ground. 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.

6.20 CONNECTORS AND INSULATION

6.20.1 Use solderless mechanical pressure type lugs, copper connectors for splicing wires greater than no 8mm.sq. All splices shall be properly insulated using #M brand 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.

6.21 BRANCH CIRCUITS

6.21.1 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.

6.22 MOTOR CONNECTIONS

6.22.1 Connect the motor starting devices for all motors, except where 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.

6.22.2 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.

6.22.3 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.

6.23 RECORD DRAWINGS AND AS BUILT PLANS

6.23.1 The Electrical Contractor shall keep an active record of the actual installation works during the progress job. The 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.

6.23.2 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.

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.***

Republic of the Philippines
Quezon City
Office of the City Mayor

QUEZON CITY BIDS & AWARDS COMMITTEE
(QC-BAC-INFRA)

PROJECT : **PROPOSED CONSTRUCTION OF WAITING SHEDS FOR VARIOUS Q.C. BUS STOPS (QUEZON CITY BUS AUGMENTATION PROGRAM) TYPE 4a -BUS STOP POST - REFELCTIVE DESIGN**

LOCATION : **Quezon City**

SUBJECT : **GENERAL CONDITIONS AND TECHNICAL SPECIFICATIONS**

I. GENERAL CONDITIONS

1.0 DEFINITIONS

a. **OWNER** : **LOCAL GOVERNMENT OF QUEZON CITY**

b. **CONTRACTOR** : Any individual, form, corporation partnership or association that enters into an agreement with the Owner for furnishing the materials and/or labor, tools, equipment, plant and other facilities required for the erection and completion of the project subject to the accompanying plans and working drawings

c. The Owner/Implementing Agency and the Contractor are treated through the contract documents as if each were of the regular number, masculine gender.

1.1 EXAMINATION OF MEMBER

The Contractor shall carefully examine the premises before submitting any bids to enable him to have full knowledge of conditions existing therein.

1.2 LOCATION

The above said Project shall be built at the location stated on the approved Location Plan.

1.3 EXECUTION, CORRELATION & INTENT OF DOCUMENTS

a. The Contract Documents are signed in sufficient number of copies by all parties concerned In case anybody fails to sign copies of any item forming part of the set contract documents, the Implementing Agency's identification thereon shall suffice.

b. The items, specifications and all other documents forming the contract documents are complementary. Anything shown on plans but not mentioned in the specifications or vice versa or anything not expressly set forth in either, but necessarily implied, shall be furnished or done as if specifically shown and mentioned in both with no extra charge. Where dimensions are given in figures, follow them in preference to measurement by scale.

c. Execute work as per agreement, making no changes or deviations whatsoever, without prior permission from the Implementing Agency.

d. The Contractor shall verify and check all dimensions particularly those on the plans. He will be held directly responsible in case of any discrepancy that may be discovered during the progress of work.

1.4 DETAIL DRAWINGS AND INSTRUCTIONS

Plans furnished for use at the jobsite are whenever necessary, supplemented by detail drawings and instructions essential to the proper execution of the work Such supplementary detail drawings and instructions shall be treated as of equal force as though originally issued.

1.5 PLANS AND PROJECT SITE

Keep at project site, in good order and condition, one (1) set of approved plans, specifications, supplementary detail drawings and instructions.

1.6 SHOP DRAWINGS

Shop drawings shall be provided by the Implementing Agency and/or Contractor during the progress of construction. The contractor should not place any item subject to shop drawings until the Implementing Agency shall have duly approved such drawings.

1.7 CHANGES

The Owner and the Implementing Agency reserve the right to make alterations or additions, including changes during the progress of work. The same shall be carried into effect without in any way deviating from or violating any agreement. Whatever amount shall necessarily be entailed in the cost of labor or materials or both shall be added to or deducted from the original contract price.

1.8 TIME OF COMPLETION AND SCHEDULE OF CONSTRUCTION

The Contractor shall, before actual commencement of the project operations prepare and submit to the Implementing Agency for verification and approval, a complete and comprehensive work schedule covering the entire duration of construction. He shall also include therein the estimated number of days within which the entire project shall be completed stage by stage by phase.

1.9 WORKMANSHIP

The project shall be executed with the use of first class workmanship to the full intent and meaning of the plans and specifications and to the complete approval and acceptance by the Implementing Agency.

1.10 MATERIALS

All materials to be used shall be the best of their respective types and kind. They shall be properly stored and protected from damage or injury.

1.11 SAMPLES

Submit samples as specified and proceed with the work with the use of materials procured based on the samples previously approved by the Implementing Agency.

1.12 INSPECTION OF WORK

The Contractor shall provide the facility for inspecting the work to the Implementing Agency, the Owner and other personnel having jurisdiction over the work.

1.13 DEFECTIVE OR IMPROPER WORK

All work or materials not acceptable to the Architect shall be removed immediately and replaced with appropriate work or materials without extra charge. All condemned materials shall be taken away from the premises without delay.

1.14 BUILDING LAWS AND REGULATIONS

The Contractor shall be held responsible for strict compliance with existing labor laws and regulations and shall free the Owner from any responsibility in connection therewith. he shall pay on time at his own expense, all taxes, fees and/or licenses due to the government, both national and local arising from his work on the project.

1.15 MANNER OF PAYMENT

Payments to the Contractor shall be based on the periodic work accomplishments subject to verification, approval and recommendation by the Implementing Agency.

1.16 RETENTION MONEY

Progress payments shall be subject to a ten percent (10%) deduction, referred to as retention money. All retained amounts shall be released upon satisfactory completion of the work and issuance of the Certificate of Final Completion and Acceptance.

1.17 TEMPORARY WATER, POWER AND TELEPHONE FACILITIES

The Contractor shall make the necessary arrangements with the local utility companies so as to provide temporary facilities for the supply of water, power and telephone for the duration of construction, and all expenses in connection therewith shall be borne by the Contractor.

1.18 PRIVY

The Contractor shall provide a temporary privy in a most inconspicuous and sanitary manner, and shall have it removed at the termination of the work.

1.19 CLEARING AND CLEANING

Upon its completion, the project and its premises shall be cleared and cleaned as directed by the Implementing Agency, and make ready for immediate occupancy.

1.20 TEMPORARY BARRICADES, SIGNAL LIGHTS, BILLBOARDS, ETC.

The Contractor shall provide all temporary barricades, signal lights, Architect and Contractor's billboards the required official building billboard, etc., necessary for the protection of the public and for the proper prosecution of the work and display of construction requirements

1.21 PERFORMANCE AND GUARANTEE BOND

To guarantee the faithfu' performance of the Contractor under the contract. he shall post a Performance Bond in the amount of thirty percent (30%) of the contract price in the form of cash, manager's check or surety bond. callable on demand.

1.22 QUESTIONS AND DISAGREEMENTS

All questions and disagreements between the Contractor and the Owner relative to the interpretation of the plans and specifications shall be referred to the Implementing Agency whose decision on the matter shall be final.

II. TECHNICAL SPECIFICATIONS

2.0 SITE WORK

WORK INCLUDED

a. Signage including 3m brand engineering grade prismatic, painting, framing and accessories

2.1 DISPOSAL OF EXCESS MATERIALS

Any excess and demolished materials remaining after completion of the earthwork shall be disposed of by hauling and transported out of the premises at the contractor's own expense.

III CONCRETE

3.0 GENERAL

3.0.1 Unless otherwise specified herein, concrete work shall conform to the requirements of ACI Building Code Full cooperation shall be given other 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.

3.1 SUBMITTALS

3.1.1 Shop Drawings Reproduction of contract drawings is unacceptable.

3.1 2 Shop Drawings for Reinforcing Steel: ACI 318. Indicate bending diagrams, assembly diagrams, splicing and lap of bars, shapes. Dimensions and details of bar reinforcing accessories and concrete cover Do not scale dimensions from structural drawings to determine lengths of reinforcing bars.

3.1 3 Contractor Mix Design: Thirty (30) days prior to concrete placement, submit a design for each strength and type of concrete. Furnish a complete list of materials including type. brand; source and amount of cement and admixtures. applicable reference specifications and copies of test reports showing that the mix has been successfully tested to produce concrete with the properties specified and will be suitable for the job conditions. Provide fly ash and pozzolan test results performed within six (6) months of submittal date. Obtain approval before concrete placement

3.1.4 Certificates of Compliance
- a. Aggregates
- b. Admixtures
- c. Reinforcement
- d Cement

3.1.5 Catalogue Data
- a Water stops
- b Materials for Curing Concrete
- c. Joint Sealant
- d Joint Filler
- e. Vapor Barrier
- f. Epoxy Bonding Agents

3.2 MATERIALS

3.2.1 Cement for concrete shall conform to the requirements of specifications for Portland cement (ASTM C-150).

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

3.2.3 Fine Aggregates shall consist of hard, tough, durable uncoated particles The shape of the particles shall be generally rounded or cubicle and reasonably free from flat or elongated particles The stipulated percentages of fines in the sand shall be obtained either by processing sand or by the production of suitable graded manufactured sand

3 2 4 Coarse Aggregates shall consist of gravel. Crushed gravel or rock. Or a combination of gravel and rock Coarse aggregates shall consist of hard, tough, durable, clean and uncoated particles The size of coarse aggregates top be used in the various parts of the Work shall be ¾'.

3.2.5 Reinforcing bars shall conform to the requirements of ASTM Standard specifications for Billet Steel Bars for concrete reinforcement (A15-625) and to Specification for minimum requirements for the deformed steel bars for concrete reinforcement (A305-56). Tensile strength and grade for all reinforcing bars such as main horizontal (for beams), vertical (for columns). ties, stirrups and inserts shall be as follows

SCHEDULE OF REINFORCING BARS (PNS-49)

DIAMETER OF BARS	GRADE (fy)
12mmØ & smaller	33 (230mpa)

3.3 PROPORTIONING AND MIXING

3.3.1 Proportioning of all materials entering into the concrete mixture of 3,000 psi concrete shall be as follows:

Class	Cement	Sand	Gravel
A	1	2 0	4

3.3.2 Strength of Concrete: Concrete shall have 28-day cylinder strength of 3,000 psi shall be for slab on grade, site pavements and wall footings.

3.3.3 Mixing Concrete of 3,000 psi compressive strength shall be ready-mixed in transit from batching plant as scheduled order from qualified supplier, ***accredited by Engineer.*** The 3,000 psi concrete can be machine mixed on-site.

3.3.4 On-site mixing shall be within 30 minutes after the cement has been added to the aggregates

3.4 FORMS

3.4.1 General Forms shall be used whenever necessary to continue the concrete and shape it to the required lines or to ensure the concrete contamination with materials caving from adjacent excavated surfaces. Forms shall have sufficient strength to withstand the pressure resulting from placement and vibration of the concrete, and shall be maintained rigidly in correct position. Forms shall be sufficiently tight to prevent loss of mortar from the concrete. Forms for exposed surfaces against which backfill is not to be placed shall be lined with a form grade plywood or metal panels.

3.4.2 Cleaning and Use of Forms Before placing the concrete, the contact surfaces of the form shall be cleansed of encrustation of mortar, the grout or other foreign material, and shall be coated with commercial form oil that will prevent sticking and will not stain the concrete surfaces.

3.4.3 Removal of Forms: Forms shall be removed in a manner that will prevent damage to the concrete. Forms shall not be removed without approval. Any repairs of surface imperfections shall be performed at once and curing shall be started as soon as the surface is sufficiently hard to permit it without further damage

3.5 PLACING REINFORCEMENT

General: Steel reinforcement shall be provided as indicated, together with all necessary gauge 16 G I. wire ties, 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 of sufficient strength to maintain the operation The 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

3.6 CONVEYING AND PLACING CONCRETE

3.6.1 Conveying: Concrete shall be conveyed from mixer to forms as rapidly as practicable, by methods that 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

3.6.2 Placing: Concrete shall be worked readily into the corners and angles of forms and around all reinforcement and embedded 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 consequent 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.

3.6.3 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.

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

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

3.7 CURING

3.7.1 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.

3.7.2 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 wet spraying or intermittent hosing.

3.8 FINISHING

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

3.8.2 Concrete slabs on fill: The concrete slabs on fill laid on a prepared foundation consisting of sub-grade and granular fill with thickness equal to the thickness of overlaying slab except as indicated otherwise.

3.9 SURFACE FINISHES

3.9.1 Defects: Repair formed surfaces by removing minor honeycombs, pits greater than one square inch surface area or 0.25 inch maximum depth, or otherwise defective areas. Provide edges perpendicular to the surface and patch with non-shrink f=grout. Patch the holes and defects when the forms are removed.

3.9.2 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

3.9.3 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

3.9.4 Pavements: Screed the concrete with a template advanced with a combined longitudinal and crosswise motion. Maintain a slight surplus of concrete ahead of the template. After screeding, float the concrete longitudinally and refloat as necessary. Obtain final finish be belting. Lay belt flat on the concrete surface and advance with a sawing motion: continue until a uniform but gritty non-slip surface is obtained. Round edges and joints with an edger having a radius of 1/8 inch

3.9.6 Broomed: Provide for exterior walks, platforms, patios and ramps. Unless otherwise indicated, provide a floated finish, and then finish with a flexible bristle broom. Permit surface to harden sufficiently to retain the scoring or ridges. Broom traverse to traffic or at right angles to the slope of the slab.

3.9.6 Pits and Trenches: Place bottoms and walls monolithically or provide water stops and keys

3.9.7 Curbs and Gutters: Provide contraction joints spaced at every 10 feet maximum unless otherwise indicated. Cut contraction joints ¼-inch deep with a jointing tool after the surface has been finished. Provide expansion joints ½-inch thick and spaced at every 100 feet maximum unless otherwise indicated. Provide a pavement finish.

3.10 MISCELLANEOUS

3.10.1 Construction Joints: Locate joints to least impair strength, continue reinforcement across joints unless otherwise indicated.

3.10.2 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

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.***

Republic of the Philippines
Quezon City
Office of the City Mayor
QUEZON CITY BIDS & AWARDS COMMITTEE
(QC-BAC-INFRA)

PROJECT : **PROPOSED CONSTRUCTION OF WAITING SHEDS FOR VARIOUS Q.C. BUS STOPS (QUEZON CITY BUS AUGMENTATION PROGRAM) TYPE 4b -BUS STOP POST - SOLAR POWERED LIGHTING**

LOCATION : **Quezon City**

SUBJECT : **GENERAL CONDITIONS AND TECHNICAL SPECIFICATIONS**

I. GENERAL CONDITIONS

1.0 DEFINITIONS

a. **OWNER** : **LOCAL GOVERNMENT OF QUEZON CITY**

b. **CONTRACTOR** : Any individual, form, corporation partnership or association that enters into an agreement with the Owner for furnishing the materials and/or labor, tools, equipment plant and other facilities required for the erection and completion of the project subject to the accompanying plans and working drawings

c. The Owner/Implementing Agency and the Contractor are treated through the contract documents as if each were of the regular number, masculine gender.

1.1 EXAMINATION OF MEMBER

The Contractor shall carefully examine the premises before submitting any bids to enable him to have full knowledge of conditions existing therein

1.2 LOCATION

The above said Project shall be built at the location stated on the approved Location Plan.

1.3 EXECUTION, CORRELATION & INTENT OF DOCUMENTS

a. The Contract Documents are signed in sufficient number of copies by all parties concerned In case anybody fails to sign copies of any item forming part of the set contract documents, the Implementing Agency's identification thereon shall suffice

b. The items, specifications and all other documents forming the contract documents are complementary. Anything shown on plans but not mentioned in the specifications or vice versa or anything not expressly set forth in either, but necessarily implied, shall be furnished or done as if specifically shown and mentioned in both, with no extra charge Where dimensions are given in figures, follow them in preference to measurement by scale.

c. Execute work as per agreement, making no changes or deviations whatsoever, without prior permission from the Implementing Agency.

d. The Contractor shall verify and check all dimensions particularly those on the plans. He will be held directly responsible in case of any discrepancy that may be discovered during the progress of work.

1.4 DETAIL DRAWINGS AND INSTRUCTIONS

Plans furnished for use at the jobsite are whenever necessary, supplemented by detail drawings and instructions essential to the proper execution of the work. Such supplementary detail drawings and instructions shall be treated as of equal force as though originally issued.

1.5 PLANS AND PROJECT SITE

Keep at project site, in good order and condition, one (1) set of approved plans, specifications supplementary detail drawings and instructions.

1.6 SHOP DRAWINGS

Shop drawings shall be provided by the Implementing Agency and/or Contractor during the progress of construction. The contractor should not place any item subject to shop drawings until the Implementing Agency shall have duly approved such drawings.

1.7 CHANGES

The Owner and the Implementing Agency reserve the right to make alterations or additions, including changes during the progress of work. The same shall be carried into effect without in any way deviating from or violating any agreement. Whatever amount shall necessarily be entailed in the cost of labor or materials or both shall be added to or deducted from the original contract price

1.8 TIME OF COMPLETION AND SCHEDULE OF CONSTRUCTION

The Contractor shall, before actual commencement of the project operations, prepare and submit to the Implementing Agency for verification and approval, a complete and comprehensive work schedule covering the entire duration of construction He shall also include therein, the estimated number of days within which the entire project shall be completed stage by stage by phase

1.9 WORKMANSHIP

The project shall be executed with the use of first class workmanship to the full intent and meaning of the plans and specifications and to the complete approval and acceptance by the Implementing Agency.

1.10 MATERIALS

All materials to be used shall be the best of their respective types and kind They shall be properly stored and protected from damage or injury

1.11 SAMPLES

Submit samples as specified and proceed with the work with the use of materials procured based on the samples previously approved by the Implementing Agency.

1.12 INSPECTION OF WORK

The Contractor shall provide the facility for inspecting the work to the Implementing Agency, the Owner and other personnel having jurisdiction over the work

1.13 DEFECTIVE OR IMPROPER WORK

All work or materials not acceptable to the Architect shall be removed immediately and replaced with appropriate work or materials without extra charge. All condemned materials shall be taken away from the premises without delay

1.14 BUILDING LAWS AND REGULATIONS

The Contractor shall be held responsible for strict compliance with existing labor laws and regulations and shall free the Owner from any responsibility in connection therewith. he shall pay on time at his own expense, all taxes, fees and/or licenses due to the government, both national and local arising from his work on the project

1.15 MANNER OF PAYMENT

Payments to the Contractor shall be based on the periodic work accomplishments subject to verification approval and recommendation by the Implementing Agency.

1.16 RETENTION MONEY

Progress payments shall be subject to a ten percent (10%) deduction, referred to as retention money. All retained amounts shall be released upon satisfactory completion of the work and issuance of the Certificate of Final Completion and Acceptance

1.17 TEMPORARY WATER, POWER AND TELEPHONE FACILITIES

The Contractor shall make the necessary arrangements with the local utility companies so as to provide temporary facilities for the supply of water, power and telephone for the duration of construction, and all expenses in connection therewith shall be borne by the Contractor.

1.18 PRIVY

The Contractor shall provide a temporary privy in a most inconspicuous and sanitary manner, and shall have it removed at the termination of the work.

1.19 CLEARING AND CLEANING

Upon its completion, the project and its premises shall be cleared and cleaned as directed by the Implementing Agency, and make ready for immediate occupancy.

1.20 TEMPORARY BARRICADES, SIGNAL LIGHTS, BILLBOARDS, ETC.

The Contractor shall provide all temporary barricades, signal lights, Architect and Contractor's billboards, the required official building billboard, etc., necessary for the protection of the public and for the proper prosecution of the work and display of construction requirements

1.21 PERFORMANCE AND GUARANTEE BOND

To guarantee the faithful performance of the Contractor under the contract, he shall post a Performance Bond in the amount of thirty percent (30%) of the contract price in the form of cash, manager's check or surety bond, callable on demand

1.22 QUESTIONS AND DISAGREEMENTS

All questions and disagreements between the Contractor and the Owner relative to the interpretation of the plans and specifications shall be referred to the Implementing Agency whose decision on the matter shall be final.

II. TECHNICAL SPECIFICATIONS

2.0 SITE WORK

WORK INCLUDED

a. Signage with solar & fixture, acrylic, backlit, painting, framing and accessories

2.1 DISPOSAL OF EXCESS MATERIALS

Any excess and demolished materials remaining after completion of the earthwork shall be disposed of by hauling and transported out of the premises at the contractor's own expense

III CONCRETE

3.0 GENERAL

3.0.1 Unless otherwise specified herein, concrete work shall conform to the requirements of ACI Building Code. Full cooperation shall be given other 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.

3.1 SUBMITTALS

3.1.1 Shop Drawings: Reproduction of contract drawings is unacceptable.

3.1.2 Shop Drawings for Reinforcing Steel ACI 318. Indicate bending diagrams, assembly diagrams, splicing and lap of bars, shapes. Dimensions and details of bar reinforcing, accessories and concrete cover. Do not scale dimensions from structural drawings to determine lengths of reinforcing bars.

3.1.3 Contractor Mix Design: Thirty (30) days prior to concrete placement, submit a design for each strength and type of concrete. Furnish a complete list of materials including type, brand; source and amount of cement and admixtures, applicable reference specifications and copies of test reports showing that the mix has been successfully tested to produce concrete with the properties specified and will be suitable for the job conditions Provide fly ash and pozzolan test results performed within six (6) months of submittal date. Obtain approval before concrete placement.

3 1.4 Certificates of Compliance
- a. Aggregates
- b. Admixtures
- c Reinforcement
- d. Cement

3.1.5 Catalogue Data
- a. Water stops
- b. Materials for Curing Concrete
- c. Joint Sealant
- d. Joint Filler
- e Vapor Barrier
- f Epoxy Bonding Agents

3.2 MATERIALS

3.2.1 Cement for concrete shall conform to the requirements of specifications for Portland cement (ASTM C-150).

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

3.2 3 Fine Aggregates shall consist of hard, tough, durable uncoated particles The shape of the particles shall be generally rounded or cubicle and reasonably free from flat or elongated particles. The stipulated percentages of fines in the sand shall be obtained either by processing sand or by the production of suitable graded manufactured sand

3.2 4 Coarse Aggregates shall consist of gravel. Crushed gravel or rock Or a combination of gravel and rock. Coarse aggregates shall consist of hard, tough durable, clean and uncoated particles The size of coarse aggregates top be used in the various parts of the Work shall be ¾"

3 2.5 Reinforcing bars shall conform to the requirements of ASTM Standard specifications for Billet Steel Bars for concrete reinforcement (A15-625) and to Specification for minimum requirements for the deformed steel bars for concrete reinforcement (A305-56). Tensile strength and grade for all reinforcing bars such as main horizontal (for beams), vertical (for columns), ties, stirrups and inserts shall be as follows

SCHEDULE OF REINFORCING BARS (PNS-49)

DIAMETER OF BARS	GRADE (fy)
12mmØ & smaller	33 (230mpa)

3.3 PROPORTIONING AND MIXING

3 3 1 Proportioning of all materials entering into the concrete mixture of 3,000 psi concrete shall be as follows:

Class	Cement	Sand	Gravel
A	1	2.0	4

3.3 2 Strength of Concrete: Concrete shall have 28-day cylinder strength of 3,000 psi shall be for slab on grade, site pavements and wall footings.

3.3.3 Mixing Concrete of 3,000 psi compressive strength shall be ready-mixed in transit from batching plant as scheduled order from qualified supplier, ***accredited by Engineer.*** The 3,000 psi concrete can be machine mixed on-site

3.3 4 On-site mixing shall be within 30 minutes after the cement has been added to the aggregates.

3.4 FORMS

3 4 1 General: Forms shall be used whenever necessary to continue the concrete and shape it to the required lines, or to ensure the concrete 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 rigicly in correct position. Forms shall be sufficiently tight to

prevent loss of mortar from the concrete. Forms for exposed surfaces against which backfill is not to be placed shall be lined with a form grade plywood or metal panels.

3.4.2 Cleaning and Use of Forms: Before placing the concrete, the contact surfaces of the form shall be cleansed of encrustation of mortar, the grout or other foreign material, and shall be coated with commercial form oil that will prevent sticking and will not stain the concrete surfaces.

3.4.3 Removal of Forms: Forms shall be removed in a manner that will prevent damage to the concrete. Forms shall not be removed without approval. Any repairs of surface imperfections shall be performed at once and curing shall be started as soon as the surface is sufficiently hard to permit it without further damage.

3.5 PLACING REINFORCEMENT

General: Steel reinforcement shall be provided as indicated, together with all necessary gauge 16 G.I. wire ties, 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 of sufficient strength to maintain the operation. The 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.

3.6 CONVEYING AND PLACING CONCRETE

3.6.1 Conveying. Concrete shall be conveyed from mixer to forms as rapidly as practicable, by methods that 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.

3.6.2 Placing: Concrete shall be worked readily into the corners and angles of forms and around all reinforcement and embedded 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 consequent 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.

3.6.3 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.

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

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

3.7 CURING

3.7.1 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.

3.7.2 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 wet spraying or intermittent hosing.

3.8 FINISHING

3.8.1 Concrete surfaces shall not be plastered unless otherwise indicated. Exposed concrete surfaces shall be formed with smooth form material, and after removal of forms, the surfaces shall be smooth, true to line and shall present a finished appearance except for minor defects which can be easily repaired by patching with

cement mortar, or can be grounded to a smooth surface to remove all joint marks of the form work.

3 8 2 Concrete slabs on fill: The concrete slabs on fill laid on a prepared foundation consisting of sub-grade and granular fill with thickness equal to the thickness of overlaying slab except as indicated otherwise.

3.9 SURFACE FINISHES

3.9.1 Defects. Repair formed surfaces by removing minor honeycombs, pits greater than one square inch surface area or 0 25 inch maximum depth, or otherwise defective areas. Provide edges perpendicular to the surface and patch with non-shrink f=grout. Patch the holes and defects when the forms are removed.

3 9 2 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.

3 9 3 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.

3 9 4 Pavements Screed the concrete with a template advanced with a combined longitudinal and crosswise motion. Maintain a slight surplus of concrete ahead of the template After screeding, float the concrete longitudinally and refloat as necessary Obtain final finish be belting Lay belt flat on the concrete surface and advance with a sawing motion, continue until a uniform but gritty non-slip surface is obtained. Round edges and joints with an edger having a radius of 1/8 inch

3.9 5 Broomed: Provide for exterior walks, platforms, patios and ramps. Unless otherwise indicated, provide a floated finish, and then finish with a flexible bristle broom. Permit surface to harden sufficiently to retain the scoring or ridges. Broom traverse to traffic or at right angles to the slope of the slab

3.9 6 Pits and Trenches. Place bottoms and walls monolithically or provide water stops and keys.

3 9 7 Curbs and Gutters. Provide contraction joints spaced at every 10 feet maximum unless otherwise indicated Cut contraction joints ¾-inch deep with a jointing tool after the surface has been finished Provide expansion joints ½-inch thick and spaced at every 100 feet maximum unless otherwise indicated. Provide a pavement finish

3.10 MISCELLANEOUS

3 10.1 Construction Joints: Locate joints to least impair strength; continue reinforcement across joints unless otherwise indicated

3 10.2 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.

IV ELECTRICAL WORKS

4.0 WORK INCLUDED

4 0.0 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 of the said Project stated of the above title and located imposed on the location plan in accordance with this specification and accompanying drawings of materials and finishes.

4.0.1 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.

4.0.2 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.

4.1 CODES, NSPECTIONS, PERMITS AND FEES

4.1.1 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.

4.1.2 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.

4.2 TEST

4.2.1 The electrical contractor shall apply such test, replace or remedy all defective work and adjust such system as needed or as the Architect or the owner shall direct. He shall also instruct the proper use of the system and equipment to persons designated by the owner.

4.3 MEASUREMENTS

4.3.1 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.

4.4 SLEEVES AND FORMS FOR OPENINGS

4.4.1 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.

4.5 LOCATION OF OUTLETS

4.5.1 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.

4.6 GROUNDINGS

4.6.1 All metallic conduits, supports, cabinets and equipment shall be properly grounded and bonded by means of copper straps. The conduits of such system shall be grounded by connecting to the grounding rod.

4.6.2 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.

4.7 WIRING METHODS

4.7.1 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.

4.8 GUARANTEE

4.8.1 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

4.8.2 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.

4.9 MATERIALS

4.9.1 All materials shall be new and shall conform to the standards of *Underwriter's Laboratories, Inc.*

4.9.2 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.

4.9.3 Materials sample shall be submitted for approval as required by the Architect and Electrical Engineer.

4.10 WIRES

4.10.1 All wires shall be copper, soft drawned 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

4.10.2 All wires and cables shall comply with the requirements of the *Underwriters Laboratories Inc.*, the ASTM and the IPCEA as to their particular usage.

4.10.3 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

4.10.4 For lighting and power system, no wire smaller than 3.5mm^2 shall be used except for control leads/ grounding wire.

4.10.5 All wires and cables shall be manufactured by a reliable manufacturing company acceptable to the Electrical Engineer of the owner

4.11 CONDUITS

4.11.1 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, any brand acceptable to the Electrical Engineer of the Owner.

7.11.0 Polyvinyl 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

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.

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

4.11.3 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.

4.11.4 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

4.11.5 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.

4.12 OUTLET BOXES AND FITTINGS

4.12.1 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

4.12.2 The Contractor shall consult with the Electrical Engineer as to the nature of various fittings 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.

4.12.3 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.

4.13 SWITCHES

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

4.14 RECEPTACLES

4.14.1 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 shall be provided.

4.15 PLATES

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

4.16 SWITCH GEAR, PANEL BOARDS AND CABINETS

4.16.1 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.

4.16.2 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.

4.16.3 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.

4.16.4 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

4.16.5 All circuit breakers with frame size above 100AT shall have minimum interrupting capacity of 22 KAIC at 230 volts and frame size 70AT and below shall have minimum interrupting capacity of 18 KAIC at 230 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.

4.16.6 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.

4.16.7 Cardholder on inside of door with clear plastic cover and complete typewritten schedule of panel branch circuit shall be provided. Leave spare circuit blank.

4.16.8 Submit samples and or product description of panel board to be used for approval prior to ordering and installation

4.17 ELECTRIC SERVICE

4.17.1 The electric service shall be three (1)-phase, 3 wires + 1 - ground. 230volts, 60 hertz. The sizes of service entrance conductor and conduit are shown in the plans

4.17.2 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.

4.18 LIGHTING SYSTEM

4.18.1 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.

4.18.2 All wiring shall be installed in conduits, and in general shall be concealed. Buried underground in concrete encasement and/or embedded in concrete.

4.18.3 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 - 1.4 above finish floor line
Receptacles - 0.3 above finish floor line

4.19 DISTRIBUTION FEEDERS

4.19.1 Distribution voltage shall be 230volts, three (1)-phase, 3 wires + 1 - ground. 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.

4.20 CONNECTORS AND INSULATION

4.20.1 Use solderless mechanical pressure type lugs, copper connectors for splicing wires greater than no 8mm.sq. All splices shall be properly insulated using #M brand 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

4.21 BRANCH CIRCUITS

4.21.1 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.

4.22 MOTOR CONNECTIONS

4.22.1 Connect the motor starting devices for all motors, except where 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

4.22.2 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.

4.22.3 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.

4.23 RECORD DRAWINGS AND AS BUILT PLANS

4.23.1 The Electrical Contractor shall keep an active record of the actual installation works during the progress job. The 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.

4.23.2 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.

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.***

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.

PROJECT TITLE : **PROPOSED CONSTRUCTION OF WAITING SHEDS FOR VARIOUS QUEZON CITY BUS STOPS (QUEZON CITY HALL BUS AUGMENTATION PROGRAM)**

LOCATION : **Various Barangays in Quezon City**

PROJECT NO. : **21 - 00139**

DURATION : **One Hundred Eighty (180) Calendar Days**

BREAKDOWN OF COST

ITEM NO.	WORK DESCRIPTION AND SCOPE OF WORKS	DIRECT COST	INDIRECT COST	AMOUNT
I	GENERAL REQUIREMENTS	₱	₱	₱
II	CONSTRUCTION/FABRICATION OF WAITING SHEDS AND STEEL POSTS			

TOTAL COST ₱ _____

LUMP SUM BID IN WORDS : _____

_____

Contractor : _____

BILL OF QUANTITIES

(Building Construction/Rehabilitation Project)

PROJECT TITLE : PROPOSED CONSTRUCTION OF WAITING SHEDS FOR VARIOUS QUEZON CITY BUS STOPS (QUEZON CITY HALL BUS AUGMENTATION PROGRAM)

LOCATION : Various Barangays in Quezon City

PROJECT NO. : 21 - 00139

DURATION : One Hundred Eighty (180) Calendar Days

Scope of Works:

1 General Requirements including billboard, construction safety & health, and steel barricades.

2 Removal of existing concrete pavement, curb & gutter, excavation for structures and roadway excavation.

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

ITEM NO.	WORK DESCRIPTION AND SCOPE OF WORKS	QTY	UNIT	UNIT COST	AMOUNT
I	**GENERAL REQUIREMENTS**				
SPL7	Billboard	6	unit	₱	₱
SPL12	Construction Safety and Health	1	unit		
SPL 13a	Steel Barricade (Rental)	64	unit		
				Direct Cost I	**₱**
II	**CONSTRUCTION/FABRICATION OF WAITING SHEDS AND STEEL POSTS**				
A.	Route 1 - Quezon City Hall - Cubao				
SPL63a	Type 1 - Bus Station with Dispatching Booth	1	set	₱	₱
SPL63b	Type 2 - Bus Stop Information Stand and Bench	1	set		
SPL63d	Type 4a - Bus Stop Post, Reflective Design	6	set		
SPL63e	Type 4b - Bus Stop Post, With Solar Powered Lighting	2	set		
				Material Cost A	₱
				Labor Cost A	
				Subtotal A	₱
B.	Route 2 - Quezon City Hall - LITEX/IBP Road				
SPL63a	Type 1 - Bus Station with Dispatching Booth	2	set		
SPL63b	Type 2 - Bus Stop Information Stand and Bench	1	set		
SPL63c	Type 3 - Minor Bus Stop	1	set		
SPL63d	Type 4a - Bus Stop Post, Reflective Design	3	set		
SPL63e	Type 4b - Bus Stop Post, With Solar Powered Lighting	1	set		
				Material Cost B	₱
				Labor Cost B	
				Subtotal B	₱
C.	Route 3 - Welcome Rotunda - Aurora Boulevard/Katipunan Avenue				

ITEM NO.	WORK DESCRIPTION AND SCOPE OF WORKS	QTY	UNIT	UNIT COST	AMOUNT
SPL63a	Type 1 - Bus Station with Dispatching Booth	2	set		
SPL63d	Type 4a - Bus Stop Post, Reflective Design	10	set		
SPL63e	Type 4b - Bus Stop Post, With Solar Powered Lighting	12	set		
				Material Cost C	₱
				Labor Cost C	
				Subtotal C	₱
D.	Route 4 - Quezon City Hall - General Luis				
SPL63a	Type 1 - Bus Station with Dispatching Booth	2	set		
SPL63d	Type 4a - Bus Stop Post, Reflective Design	14	set		
SPL63e	Type 4b - Bus Stop Post, With Solar Powered Lighting	11	set		
				Material Cost D	₱
				Labor Cost D	
				Subtotal D	₱

ITEM NO.	WORK DESCRIPTION AND SCOPE OF WORKS	QTY	UNIT	UNIT COST	AMOUNT
E.	Route 5 - Quezon City Hall - Quirino Highway				
SPL63a	Type 1 - Bus Station with Dispatching Booth	1	set		
SPL63d	Type 4a - Bus Stop Post, Reflective Design	4	set		
SPL63e	Type 4b - Bus Stop Post, With Solar Powered Lighting	4	set		
				Material Cost E	₱
				Labor Cost E	
				Subtotal E	₱
F.	Route 6 - Quezon City Hall - Gilmore				
SPL63a	Type 1 - Bus Station with Dispatching Booth	2	set		
SPL63e	Type 4b - Bus Stop Post, With Solar Powered Lighting	12	set		
				Material Cost F	₱
				Labor Cost F	
				Subtotal F	₱
G.	Route 7 - Quezon City Hall - Ortigas Avenue				
SPL63a	Type 1 - Bus Station with Dispatching Booth	2	set		
SPL63e	Type 4b - Bus Stop Post, With Solar Powered Lighting	16	set		
				Material Cost G	₱
				Labor Cost G	
				Subtotal G	₱
H.	Route 8 - Quezon City Hall - Muñoz				
SPL63a	Type 1 - Bus Station with Dispatching Booth	1	set		
SPL63d	Type 4a - Bus Stop Post, Reflective Design	3	set		
SPL63e	Type 4b - Bus Stop Post, With Solar Powered Lighting	5	set		
				Material Cost H	₱
				Labor Cost H	
				Subtotal H	₱
				DIRECT COST II	**₱**

NOTE:

• Strictly enforce health protocols relative to the latest applicable DPWH Memorandum.

TOTAL DIRECT COST	**₱**
Overhead, Contingencies and Miscellaneous Expenses (OCM)	
Profit	
VAT	
TOTAL ESTIMATED COST	**₱**

Section IX. Checklist of Technical and Financial Documents

Notes on the Checklist of Technical and Financial Documents

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

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

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

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

Checklist of Technical and Financial Documents

I. TECHNICAL COMPONENT ENVELOPE

Class "A" Documents

Legal Documents

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

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

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

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

Technical Documents

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

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

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

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

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

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

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

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

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

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

Additional Technical Requirements:

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

Financial Documents

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

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

Class "B" Documents

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

II. FINANCIAL COMPONENT ENVELOPE

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

Other documentary requirements under RA No. 9184

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

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

☐ (r) Cash Flow by Quarter.

Bid Form for the Procurement of Infrastructure Projects

[shall be submitted with the Bid]

BID FORM

Date : _____

Project Identification No. : _____

To: [name and address of Procuring Entity]

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

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

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

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

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

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

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

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

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

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

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

---

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

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

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

Name: _____

Legal Capacity: _____

Signature: _____

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

Date: _____

Bid Securing Declaration Form

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

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

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

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

I/We, the undersigned, declare that:

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

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

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

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

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

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

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

Omnibus Sworn Statement (Revised)

[shall be submitted with the Bid]

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

AFFIDAVIT

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

CONTRACT AGREEMENT

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

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

NOW THIS AGREEMENT WITNESSETH AS FOLLOWS:

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

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

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

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

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

   c. Performance Security;

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

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

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

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

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

[Insert Name and Signature] *[Insert Name and Signature]*

[Insert Signatory's Legal Capacity] *[Insert Signatory's Legal Capacity]*

for: *for:*

[Insert Procuring Entity] *[Insert Name of Supplier]*

Acknowledgment

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

Performance Securing Declaration (Revised)

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

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

PERFORMANCE SECURING DECLARATION

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

I/We, the undersigned, declare that:

1. I/We understand that, according to your conditions, to guarantee the faithful performance by the supplier/distributor/manufacturer/contractor/consultant of its obligations under the Contract, I/we shall submit a Performance Securing Declaration within a maximum period of ten (10) calendar days from the receipt of the Notice of Award prior to the signing of the Contract.

2. I/We accept that: I/we will be automatically disqualified from bidding for any procurement contract with any procuring entity for a period of one (1) year for the first offense, or two (2) years **for the second offense**, upon receipt of your Blacklisting Order if I/We have violated my/our obligations under the Contract;

3. I/We understand that this Performance Securing Declaration shall cease to be valid upon:

    a. issuance by the Procuring Entity of the Certificate of Final Acceptance, subject to the following conditions:
        i. Procuring Entity has no claims filed against the contract awardee;
        ii. It has no claims for labor and materials filed against the contractor; and
        iii. Other terms of the contract; or

    b. replacement by the winning bidder of the submitted PSD with a performance security in any of the prescribed forms under Section 39.2 of the 2016 revised IRR of RA No. 9184 as required by the end-user.

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

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

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

LIST OF ALL ON-GOING GOVERNMENT AND PRIVATE CONTRACTS

NAME OF CONTRACTOR: _____

PROJECT TITLE (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 said project until its completion.

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

IN WITNESS HEREOF, I have hereunto signed my name below this _____ day of_____, _____ at _____.

AFFIANT FURTHER SAYETH NAUGHT.

_____

Affiant

SUBSCRIBED AND SWORN TO BEFORE ME this ___ day of _____, _____ in _____,

affiant exhibiting to me his/her _____ issued at _____ on _____.

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

_____

Notary Public


Republic of the Philippines
gppb
Government Procurement Policy Board