

PHILIPPINE BIDDING DOCUMENTS
(As Harmonized with Development Partners)

**Infrastructure Development/Construction of the Health and
Wellness Center, Fish and Marine Products Processing
Building and Gymnatorium, MMSU Batac Campus, City of
Batac, I.N.**

(Project Title)

P38,999,991.94

(Approved Budget for the Contract)

**Fifth Edition
August 2016**

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.

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.

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Section I. Invitation to Bid

INVITATION TO BID

2022-05

Invitation to Bid for the Infrastructure Development/Construction of the Health and Wellness center, Fish and Marine Products Processing Building and Gymnasium, MMSU Batac Campus, City of Batac, I.N.

1. The **MARIANO MARCOS STATE UNIVERSITY** (MMSU) through the General Appropriations Act of 2022 intends to apply the sum of Thirty-Eight Million Nine Hundred Ninety-Nine Thousand Nine Hundred Ninety-One Pesos & 94/100 only (P38,999,991.94) being the Approved Budget for the Contract (ABC) to payments under the contract for the above project. Bids received in excess of the ABC shall be automatically rejected at bid opening.
2. The Mariano Marcos State University now invites bids for the above Procurement Project. Completion of the works is required within Three Hundred Thirty-Six (336) calendar days. 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 (Instruction 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) 9184.
4. Interested bidders may obtain further information from **MMSU** and inspect the Bidding Documents at the address below anytime during work hours.
5. A complete set of Bidding Documents may be acquired by interested bidders on **May 23 , 2022** at the address below, upon payment of the corresponding fee in the amount of Twenty-Five Thousand Pesos (P25,000.00) Bid Documents may also be downloaded from the website of the Philippine Government Electronic Procurement System (PhilGEPS) and at the website of **MMSU**, provided the corresponding Bid Fee are paid prior to the submission of the bid.
6. The **MARIANO MARCOS STATE UNIVERSITY** will hold a Pre-Bid Conference on **May 31, 2022** at 2:00 PM at the Conference Room, FEM Hall Extension Building, MMSU, City of Batac and/or through video conferencing or webcasting via Google Meet (meet.google.com/zzk-dmhp-gpc) which will be open to prospective bidders.
7. Bids must be duly received by the BAC Secretariat through a) manual submission at the address as indicated below, b) online or electronic submission as indicated below, or c) both on or before **June 14, 2022, 2:00 PM**. 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 15.

9. Bid opening shall be on **June 14, 2022 at 2:00** PM at the Conference Room, FEM Hall Extension Building, MMSU City of Batac and/or through algabriel@mmsu.edu.ph Bids will be opened in the presence of the bidders' representatives who choose to attend the activity.
10. MMSU 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 Section 35.6 and 41 of the 2016 revised Implementing Rules and Regulations (IRR) of RA 9184 without thereby incurring any liability to the affected bidder or bidders.
11. For further information, please refer to:

Ms. AGNES L GABRIEL

Chief, BAC Secretariat
Mariano Marcos State University
City of Batac, Ilocos Norte
Email: algabriel@mmsu.edu.ph

12. You may visit the following websites:

For downloading of Bidding Documents:

<https://bac-admin.mmsu.edu.ph/bids>

<https://notices.philgeps.gov.ph>

May 20, 2022.


NATHANIEL R. ALIBUYOG
Chair

SECTION II. INSTRUCTION TO BIDDERS

1. Scope of Bid

The Procuring Entity, The Mariano Marcos State University Invites Bids for the above project.

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 *General Appropriations Act of 2022* in the amount of **P38,999,991.94**

2.2. The source of funding is: GAA 2022

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

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 allowed. The portions of Project and the maximum percentage allowed to be subcontracted are indicated in the **BDS**, which shall not exceed fifty percent (50%) of the contracted Works.
- 7.1. The Bidder must submit together with its Bid the documentary requirements of the subcontractor(s) complying with the eligibility criteria 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. 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 and/or through videoconferencing/webcasting} as indicated in paragraph 6 of the **IB**.

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 shall be valid for **120 calendar days**. 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 7 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 16 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

ITB Clause																																					
5.2	For this purpose, contracts similar to the Project refer to contracts which have the same major categories of work which shall be: Structural Works, Plumbing Works and Roughing ins of Electrical, Electronic and Mechanical works.																																				
5.5	For the Single Largest Completed Contract (SLCC), the supporting documents shall be the Certificate of Acceptance on the Construction Performance Evaluation System (CPES) for government projects. For private contracts, the equivalent document to be accepted is the Certificate of Completion or Acceptance.																																				
7.1	<i>Sub-contracting is not allowed.</i>																																				
10.3	<i>No further instructions.</i>																																				
10.4	The key personnel must meet the required minimum years of experience set below:																																				
	<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;"><u>Key Personnel</u></th> <th style="text-align: center;"><u>General Experience</u></th> <th style="text-align: center;"><u>No. of key Personnel</u></th> </tr> </thead> <tbody> <tr> <td>Project Manager</td> <td style="text-align: center;">2 years</td> <td style="text-align: center;">1</td> </tr> <tr> <td>Safety Officer</td> <td style="text-align: center;">2 years</td> <td style="text-align: center;">1</td> </tr> <tr> <td>First Aider</td> <td style="text-align: center;">2 years</td> <td style="text-align: center;">1</td> </tr> <tr> <td>Civil Engineer / Architect</td> <td style="text-align: center;">1 year</td> <td style="text-align: center;">1</td> </tr> <tr> <td>Electrical Engineer / RME</td> <td style="text-align: center;">1 year</td> <td style="text-align: center;">1</td> </tr> <tr> <td>Mechanical Engineer</td> <td style="text-align: center;">1 year</td> <td style="text-align: center;">1</td> </tr> <tr> <td>Electronics Engineer</td> <td style="text-align: center;">2 years</td> <td style="text-align: center;">1</td> </tr> <tr> <td>Sanitary Engineer/Master Plumber</td> <td style="text-align: center;">2 years</td> <td style="text-align: center;">1</td> </tr> <tr> <td>Construction Foreman</td> <td style="text-align: center;">1 year</td> <td style="text-align: center;">2</td> </tr> </tbody> </table>	<u>Key Personnel</u>	<u>General Experience</u>	<u>No. of key Personnel</u>	Project Manager	2 years	1	Safety Officer	2 years	1	First Aider	2 years	1	Civil Engineer / Architect	1 year	1	Electrical Engineer / RME	1 year	1	Mechanical Engineer	1 year	1	Electronics Engineer	2 years	1	Sanitary Engineer/Master Plumber	2 years	1	Construction Foreman	1 year	2						
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Construction Foreman	1 year	2																																			
10.5	The minimum major equipment requirements are the following:																																				
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12	<i>None</i>																																				

15.1	<p>The bid security shall be in the form of a Bid Securing Declaration or any of the following forms and amounts:</p> <ul style="list-style-type: none"> a. The amount of not less than <i>(2%) of ABC]</i>, if bid security is in cash, cashier's/manager's check, bank draft/guarantee or irrevocable letter of credit; b. The amount of not less than <i>five percent (5%) of ABC]</i> if bid security is in Surety Bond.
16	Each Bidder shall submit three copies of the first and second components of its Bid
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	<i>See PID</i>
21	Additional contract documents relevant to the Project that may be required by existing laws and/or the Procuring Entity, such as construction schedule and S-curve, manpower schedule, construction methods, equipment utilization schedule, construction safety and health program approved by the DOLE, and other acceptable tools of project scheduling.

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.

GCC Clause	
2	<p><i>The Intended Completion date is within 336 calendar days.</i></p> <p style="text-align: center;"><i>Time is of the essence; hence the project shall be completed within a non-extendable period of 336 calendar days regardless of fortuitous events.</i></p> <p><i>Note: The Contract duration shall be reckoned from the start date and not from contract effectivity date.</i></p> <p><i>Note: The Contract duration shall be reckoned from the start date and not from contract effectivity date.</i></p>
4.1	<p><i>The Start date is _____.</i></p> <p><i>Note: The start date shall be the date of receipt of the Notice to Proceed.</i></p>
6	<i>The site is located at MMSU, City of Batac</i>
7.2	<i>[In case of permanent structures, such as buildings of types 4 and 5 as classified under the National Building Code of the Philippines and other structures made of steel, iron, or concrete which comply with relevant structural codes (e.g., DPWH Standard Specifications), such as, but not limited to, steel/concrete bridges, flyovers, aircraft movement areas, ports, dams, tunnels, filtration and treatment plants, sewerage systems, power plants, transmission and communication towers, railway system, and other similar permanent structures:] Fifteen (15) years.</i>

10	a. Dayworks are applicable at the rate shown in the Contractor's original Bid.
11.1	The Contractor shall submit the Program of Work to the Procuring Entity's Representative within <i>[insert number]</i> days of delivery of the Notice of Award.
11.2	The amount to be withheld for late submission of an updated Program of Work is <i>[insert amount]</i> .
13	The amount of the advance payment is <i>15% of the total contract price and schedule of payment</i> .
14	<i>See Project Information Documents</i>
15.1	The date by which operating and maintenance manuals are required is <i>[date]</i> . The date by which "as built" drawings are required is <i>[date]</i> .
15.2	<i>See Project Information Documents</i>

Section VI. Specifications

Infrastructure Development / Construction of the Health and Wellness Center, Fish and Marine Products Processing Building and Gymnatorium

MMSU Batac Campus, City of Batac, Ilocos Norte

SPECIFICATIONS	
Building Part / Material	Specifications
ARCHITECTURAL	
WALL (Finishes) and PARTITION	
Interior Wall and other parts of Exterior wall	Cement plaster finished
Comfort Rooms	Cement plaster finished except area to be installed with tiles
Toilet Partition	12mm Compact board, water-resitant (show sample for design to end-user – at least 3 sample)
DOORS AND WINDOWS	
Wood Panel Doors	Mahogany wood preferably
Aluminum Glass Doors	Aluminum Frame Glass Door with pull handle, lockable door with transom., 10mm thick tempered glass, floor hinged, single leaf, with deadbolt (see plan for labeling and detail door drawings)
Aluminum Glass Windows and Partitions	Powder coated aluminum frame 12mm clear tempered glazed window
Railings and Benches	Stainless steel railings and Aluminum leg plank with foam (Bench design, color shall be approved to the end-user prior to purchasing and installation)
STRUCTURAL	
Slab on Fill, Footing Tie Beam, Column, Suspended Slab, Beam/Girder, Stair, Benches	Compressive Strength of concrete @ 28 days, $f_c' = 20.7$ Mpa (Portland Cement: Holcim or approved-equal)
Reinforcing Steel (Deformed)	Tensile Strength, $f_y = 275$ MPa (Pag-asa Steel, SteelAsia or approvedequal)

Non-load bearing CHB	Compressive Strength of concrete, $f_m' = 2.76\text{MPa}$ (minimum)
Structural Steel	Tensile Strength, $f_y = 248\text{ MPa}$
PLUMBING / SANITARY	
Sewerline pipes and fittings	S1000, uPVC, orange (Neltex, Emerald, Atlanta or approved-equal)
Waterline pipes and fittings	PP-r, PN20 (Unitec or approved-equal)
Septic Vault/Tank	water-tight, cement plastered w/ waterproof
Wastewater Tank	water-tight, cement plastered w/ waterproof
ELECTRICAL	
Electrical Roughing-ins	Conduits, Boxes and fittings
MECHANICAL	
Mechanical Roughing works	Penetration sleeves (G.I. Pipe Schedule 10)
ELECTRONICS	
FDAS and CCTV Roughing-ins	Cable trays, conduit pipes, pull boxes, junction boxes, assorted pipe hangers, anchor bolt and all other roughing accessories for electronics works

VII. Drawing (see attached)

Section VIII. Bill of Quantities

Infrastructure Development / Construction of the Health and Wellness Center, Fish and Marine Products Processing Building and Gymnatorium

(MMSU Batac Campus, City of Batac, Ilocos Norte)

BILL OF QUANTITIES			
Item No.	Description	Quantity	Unit
I	Permits and Clearances	1.00	l.s.
II	Project Billboard/Signboard	1.00	Each
	Marine Plywood, 1.2m x 2.4m x 1/4"	1.00	pcs.
	Marine Plywood, 1.2m x 2.4m x 1/4"	30.00	bd.ft.
	Coco Lumber, 2" x 2" x 8'	14.00	bd.ft.
	Hardware, CWN (assorted)	1.00	kg.
	Tarpaulin, 4' x 8'	1.00	pcs.
III	Occupational Safety and Health Program	1.00	l.s.
	First Aid Kit, Thermometer, Alcohol (70% solution) automatic alcohol sanitizer	1.00	l.s.
	Safety Shoes		mandays
	Safety Helmet		mandays
	Safety Gloves		mandays
	Face Mask		mandays
	Face Shield		mandays
	PPE Signage, 4' x 4'	1.00	set
	Safety First, 4' x 4'	1.00	set
	Warning Signs, 2' x 3'	20.00	set
	Caution tape, 100ft	1.00	rolls

IV	Mobilization / Demobilization	1.00	l.s.
PART A	EARTHWORKS		
A.5	Gravel Bedding	103.56	m ³
PART B	PLAIN & REINFORCED CONCRETE WORK		
B.1	Structural Concrete, Ready Mix, Class A, 28 days	1,025.60	m ³
B.2	Reinforcing Steel (Deformed), Grade 40	175,527.61	kg.
B.3	Steel Deck	2,107.15	m ²
B.4	Formworks and Falseworks	1.00	l.s.
	Phenolic Board, 1.2m x 2.4m x 3/4"	360.00	pc
	Good Lumber	2,880.00	bd.ft.
PART C	FINISHING & OTHER CIVIL WORKS		
C.1.1	150mm CHB Non-Load Bearing (Including Reinforcing Steel) (Gymnatorium)	3,279.60	m ²
C.1.2	150mm CHB Non-Load Bearing (Including Reinforcing Steel) (Fish and Marine)	149.63	m ²
C.2	Toilet Partition	1.00	l.s.
	Compact Board, 12mm	47.20	m ²
	Top Rail, Stainless	12.00	pcs
	Adjustable leg foot, stainless steel	24.00	pcs
	Knob Holder	10.00	pcs
	Rising Hinge	20.00	sets
	H-profile	20.00	pcs

	U-channel	15.00	pcs
	Indicator lock	10.00	pcs
	Hooks with stopper	10.00	pcs
	Stainless Wall Bracket	90.00	pcs
C.3	Aluminum-Framed Tempered Glass Door (10mm)	266.13	m ²
C.4	Fire Rated Fire Exit Door Steel Door	25.20	m ²
C.5	Wooden Panel Door	113.07	m ²
C.6	Aluminum-Framed Tempered Glass Window and Partition (12mm)	785.26	m ²
C.7.1	Cement Plaster Finish (Gymnatorium)	6,587.00	m ²
C.7.2	Cement Plaster Finish (Health and Wellness)	77.00	
C.8	4.5mm Fiber Cement Board on Metal Frame Ceiling (Health and Wellness)	114.00	
C.9	Railings and Benches	1.00	l.s.
	40mmØ Stainless Steel Pipe	333.60	m
	Acetylene	185.00	kg
	Oxygen	365.00	kg
	Welding Rod	335.00	kg
	Bleachers Seats with complete accessories and mounting accessories	678.10	l.m.
C.10	Waterproofing Cement-base	2,489.73	m ²
C.11	Plumbing Fixtures	1.00	l.s.
	Water Closet with complete accessories	32.00	set
	Urinal with complete accessories	8.00	set
	Kitchen Sink, single tub	16.00	set
	Kitchen Sink, double tub	4.00	set

	Countertop Lavatory with complete accessories	40.00	set
	Wall Hung Lavatory with complete accessories	8.00	set
	Floor Drain Plates	56.00	set
	Toilet tissue roll Dispenser	16.00	set
	Toilet tissue holder	4.00	set
	Ablution Spray	32.00	set
	Faucet, Stainless	16.00	set
	Faucet, Gooseneck, stainless steel	20.00	set
	Stainless steel grab bar	4.00	set
	Stainless steel shower head	8.00	set
	Facial Mirror	24.00	set
C.12	Septic Vault (7.35m x 2.30m x 2.05m)	1.00	l.s.
	Portland Cement	488.00	bags
	Gravel, 3/4	28.00	m ³
	Sand	24.00	m ³
	CHB, 150mm THK	1,859.00	pcs
	Reinforcing Steel Bar, deformed	3,131.00	kg
	Galvanized Iron Wire, #16	264.00	kg
	Ordinary Plywood	48.00	pcs
	Good Lumber	1,280.00	bdf
	Common Wire Nail, asstd	24.00	kgs
	Cement-base waterproofing	206.00	m ²
	4"Ø uPVC Pipe, S1000	4.00	pcs
	4"Ø Tee	20.00	pcs
	4"Ø Clean-out with plug	20.00	pcs
	PVC Solvent Cement, 400cc	4.00	cans

	Hacksaw Blade	4.00	pcs
PART D	ELECTRICAL		
D.1	Conduits, Boxes, and Fittings (Conduit Works/Conduit Roughing-in)	1.00	l.s.
	uPVC Conduit, Orange	635.00	pc/s.
	20mmØ uPVC Pipe, 2.2 thk	40.00	pc/s.
	25mmØ uPVC Pipe, 2.3 thk	95.00	pc/s.
	32mmØ uPVC Pipe, 2.4 thk	15.00	pc/s.
	50mmØ uPVC Pipe, 2.4 thk	1.00	pc/s.
	63mmØ uPVC Pipe, 2.5 thk	2.00	pc/s.
	80mmØ uPVC Pipe, 2.9 thk	1.00	pc/s.
	uPVC Adapter with Locknut, Orange		
	20mmØ	364.00	pc/s.
	25mmØ	40.00	pc/s.
	32mmØ	178.00	pc/s.
	50mmØ	12.00	pc/s.
	63mmØ	2.00	pc/s.
	80mmØ	8.00	pc/s.
	uPVC Elbow, Orange		
	20mmØ	728.00	pc/s.
	25mmØ	80.00	pc/s.
	32mmØ	356.00	pc/s.
	50mmØ	24.00	pc/s.
	63mmØ	4.00	pc/s.
	80mmØ	16.00	pc/s.
	Cable Tray, Hangers and Supports		

	Welding Rod	13.00	kg/s.
	Threaded Rod, 3/8"x1m, Galvanized	125.00	pc/s.
	Beam Clamp, 3/8	125.00	pc/s.
	Hex Nut, 3/8 dia, (50 pcs per box)	5.00	box/es.
	Square Washer, (100 pcs per box)	2.00	box/es.
	Fender Washer, 3/8 dia, (100 pcs per box)	2.00	box/es.
	Anchor Grip, 3/8 dia	125.00	pc/s.
	Strut Channel, Gauge 16, 3m, Galvanized	13.00	pc/s.
	Cable Tray Support, 0.4m, Powder Coated	9.00	pc/s.
	Wiring Devices		
	Junction Box with Cover (Octagonal), Plastic	320.00	pc/s.
	Junction Box with Cover, 4X1 1/2, Plastic	34.00	pc/s.
	Utility Box, Plastic	83.00	pc/s.
	Solvent Cement	15.00	ltr/s.
	GI Wire #16	45.00	kl/s.
	Duct Seal	5.00	lb/s.
PART E	MECHANICAL		
E.1	Mechanical Roughing Works	1.00	l.s.
	4" GI Pipe Schedule 10 (Penetration Sleeve)	1.00	pcs.
	3" GI Pipe Schedule 10 (Penetration Sleeve)	6.00	pcs.
	2" GI Pipe Schedule 10 (Penetration Sleeve)	3.00	pcs.
	Welding Rod (6011 - 3.2 mm)	2.00	pcs.

PART F	ELECTRONICS		
P.1	Electronics Roughing-ins Works	1.00	l.s.
	FDAS		
	Assorted pipe hangers, Anchor Bolt, screws, toy, and other mounting accessories and materials	1.00	Lot
	Other additional parts of the cabling installation accessories and electrical requirements	1.00	Lot
	CCTV		
	Cable race, cable trays, moulding, conduit pipes and other important parts of the cabling installation accessories and electrical requirements, pull boxes and junction boxes	1.00	lot

Checklist of Technical and Financial Documents

I. TECHNICAL COMPONENT ENVELOPE

Class "A" Documents

Legal Documents

- (a) Valid PhilGEPS Registration Certificate (Platinum Membership) (all pages);
or
- (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; **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; **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;
- 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; **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.

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).

Class "B" Documents

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

II. FINANCIAL COMPONENT ENVELOPE

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

Other documentary requirements under RA No. 9184

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

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

Bidding Forms:

Bid Form for the Procurement of Infrastructure Projects

[shall be submitted with the Bid]

1. BID FORM

Date : _____

Project Identification No. : _____

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

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

- a. We have no reservation to the PBDs, including the Supplemental or Bid Bulletins, for the Procurement Project: *[insert name of contract]*;
- b. We offer to execute the Works for this Contract in accordance with the PBDs;
- c. The total price of our Bid in words and figures, excluding any discounts offered below is: *[insert information]*;

- d. The discounts offered and the methodology for their application are: *[insert information]*;
- e. The total bid price includes the cost of all taxes, such as, but not limited to: *[specify the applicable taxes, e.g. (i) value added tax (VAT), (ii) income tax, (iii) local taxes, and (iv) other fiscal levies and duties]*, which are itemized herein and reflected in the detailed estimates,
- f. Our Bid shall be valid within the a period stated in the PBDs, and it shall remain binding upon us at any time before the expiration of that period;
- g. If our Bid is accepted, we commit to obtain a Performance Security in the amount of *[insert percentage amount]* percent of the Contract Price for the due performance of the Contract, or a Performance Securing Declaration in lieu of the the allowable forms of Performance Security, subject to the terms and conditions of issued GPPB guidelines¹ for this purpose;
- h. We are not participating, as Bidders, in more than one Bid in this bidding process, other than alternative offers in accordance with the Bidding Documents;
- i. We understand that this Bid, together with your written acceptance thereof included in your notification of award, shall constitute a binding contract between us, until a formal Contract is prepared and executed; and
- j. We understand that you are not bound to accept the Lowest Calculated Bid or any other Bid that you may receive.
- 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: _____

¹ currently based on GPPB Resolution No. 09-2020

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

Date: _____

Form of 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 *[insert the amount in specified currency in numbers and words]* 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 shall be attached, deemed to form, and be read and construed as integral part of this Agreement, to wit:
 - (a) General and Special Conditions of Contract;
 - (b) Drawings/Plans;
 - (c) Specifications;
 - (d) Invitation to Bid;
 - (e) Instructions to Bidders;
 - (f) Bid Data Sheet;
 - (g) Addenda and/or Supplemental/Bid Bulletins, if any;
 - (h) 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;
 - (i) Eligibility requirements, documents and/or statements;
 - (j) Performance Security;
 - (k) Notice of Award of Contract and the Bidder's conforme thereto;
 - (l) Other contract documents that may be required by existing laws and/or the Entity.
3. In consideration of the payments to be made by the Entity to the Contractor as hereinafter mentioned, the Contractor hereby covenants with the Entity to

execute and complete the Works and remedy any defects therein in conformity with the provisions of this Contract in all respects.

4. The Entity hereby covenants to pay the Contractor in consideration of the execution and completion of the Works and the remedying of defects wherein, the Contract Price or such other sum as may become payable under the provisions of this Contract at the times and in the manner prescribed by this Contract.

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

Signed, sealed, delivered by _____ the _____ (for the Entity)

Signed, sealed, delivered by _____ the _____ (for the Contractor).

Binding Signature of Procuring Entity

Binding Signature of Contractor

[Addendum showing the corrections, if any, made during the Bid evaluation should be attached with this agreement]

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.

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]

Doc. No. _____

Page No. _____

Book No. _____

Series of _____

* This form will not apply for WB funded projects.

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]

Standard Form Number: SF-INFR-44

Revised on: August 11, 2004

Contractor's Organizational Chart for the Contract

Submit Copy of the Organizational Chart that the Contractor intends to use to execute the Contract if awarded to him. Indicate in the chart the names of the Project Manager, Project Engineer, Bridge Engineer, Structural Engineer, Materials and Quality Control Engineer, Foreman and other Key Engineering Personnel.

Attach the required Proposed Organizational Chart for the Contract as stated above

Statement of all Ongoing Government & Private contracts including contracts awarded but not yet started

Business Name : _____ Business Address : _____

Name of Contract/ Project Cost	Date of Contract	Contract Duration	Owner's Name and Address	Kinds of Goods	Date of Delivery	Amount		End user's acceptance or official receipt(s) or sales invoice issued for the contract
						Contract	Value of Outstanding Contract	
<u>Government</u>								
<u>Private</u>								
							Total Cost	

Note: This statement shall be supported with:
 1 Notice of Award , Contract, NTP, and other docs, if necessary

Submitted by : _____
 (Printed Name & Signature)
 Designation : _____
 Date : _____

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Statement of all completed Government & private contracts which are similar in nature and complexity to the Contract to be Bid

Business Name : _____ Business Address : _____

Name of Contract/ Project Cost	Date of Contract	Contract Duration	Owner's Name and Address	Kinds of Goods	Date of Delivery	Contract Amount	End user's acceptance or official receipt(s) or sales invoice issued for the contract
<u>Government</u>							
<u>Private</u>							
Total Cost							

Note: This statement shall be supported with:

- 1 Notice of Award, Contract, NTP, and other docs, if necessary

Submitted by : _____
(Printed Name & Signature)

Designation : _____

Date : _____

Statement of Bidder's Single Largest Completed Contract (SLCC)

Business Name : _____

Business Address : _____

Name of Contract/ Project Cost	Date of Contract	Contract Duration	Owner's Name and Address	Kinds of Goods	Date of Delivery	Amount of Completed Contracts, adjusted by the Bidder	End user's acceptance or official receipt(s) or sales invoice issued for the contract
			48				
<u>Government</u>							

Infrastructure Development / Construction of the Health and Wellness Center, Fish and Marine Products Processing Building and Gymnasium

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A. PROJECT INFORMATION DOCUMENT

Project Title : Infrastructure Development / Construction of the Health and Wellness Center, Fish and Marine Products Processing Building and Gymnasium

Project Location : MMSU, Batac City / Currimao Campus, Ilocos Norte

DIVISION 1 - GENERAL REQUIREMENTS

SECTION 010 : SCOPE AND SPECIAL CONDITIONS

1.00 INTRODUCTION

The Drawings and the Project Information Document are complementary to each other. Drawings are graphic means of showing work to be done. They are particularly suited to show where materials are located. Thus, drawings exist essentially to show dimension, location and placement. Not all works however can be presented in the drawings. Generalized works are usually in statement form and, hence, the Contractor is required to read the Project Information Document carefully and understand it properly.

This Project Information Document describe the materials, construction techniques, samples, shop drawings, guarantees and other needed contract requirements. This document together with the drawings are used to inform the Contractor.

The work specified herein is for the **Infrastructure Development / Construction of the Health and Wellness Center, Fish and Marine Products Processing Center and Gymnasium** located at **MMSU-Batac Campus, City of Batac and Currimao Campus, Ilocos Norte, Philippines** amounting to **Thirty-Eight Million Nine Hundred Ninety-Nine Thousand Nine Hundred Ninety-One and 94/100 Pesos (38,999,991.94)**.

2.00 NATIONAL LAWS, LOCAL ORDINANCES AND BUILDING RULES AND REGULATIONS

Construction of the structure stipulated under this Project Information Document and related Contract Documents prepared for this project shall be in conformity with National Laws, Local Ordinances and Building Rules and Regulations.

3.00 REFERENCE TO OTHER RELATED CONTRACT DOCUMENTS

- A. Work listed and described in this document are subject to the General Conditions the Contract which forms part of this work.
- B. Detailed Specifications of more significant or more highly involved phases or trades of construction work, or those which under certain circumstances are deemed to require further elaboration or clarification, are also included in this PID.
- C. If necessary, materials, equipment and systems shall comply with the "Green Building" Requirements (USGBC/LEED).

4.00 LANGUAGE OF THE PROJECT INFORMATION DOCUMENT

The selection of structure depends on the underlying principles of this document.

- That this document are only one part of the Contract Documents;
- That the Contract is between the President (MMSU) and the General Contractor; and
- That the General Contractor is the only party responsible for completing the work in accordance with the Contract Documents.

Therefore,

- A. Only the General Contractor is referred to in the PID so as not to violate the intent of the Contract and so as not to undermine the proper chain of command.
- B. Any reference to Specialty Trade Contractor in the Technical Specifications is made only in so far as to selection. The General Contractor assumes all responsibilities for the execution of the whole project in accordance with the Contract Documents. Therefore, in the contract between the Procuring Entity and the General Contractor, the Specialty Trade Contractor is not referred to. In all Contract Documents, the word "Contractor" is meant the General Contractor.
- C. The omission of the phrase "The Contractor shall" is intentional because the whole project document is directed to the Contractor. Omitted words or phrases shall be supplied by inference in the same manner as they are when a "note" occurs in the Drawings.
- D. Where "as shown", "as indicated", "as detailed" or words of similar import are used, it shall be understood that the reference to the drawings accompanying this document is made, unless otherwise stated.
- E. As used herein, "provided" shall be understood to mean "provided complete in place" that is, "furnished and installed".

5.00 NATURE AND SCOPE OF GENERAL CONSTRUCTION WORK

- A. Work contemplated under comprehensive work shall consist of furnishing materials, labor, plant, equipment, tools, appliances, utilities, transportation, detailed superintendence and supervision, temporary construction of every nature, taxes, and satisfactory performance of work and operations necessary for complete construction of this project and deliver complete in every respect within the specified time.
- B. EXAMINATION OF SITE: Visit the site of the work and examine the premises to fully understand all existing conditions relative to the work. No increase in cost or extension of performance time will be considered for failure to verify and know actual site conditions.
- C. PERMITS & TAXES: The Contractor is responsible in securing all necessary permits and payment of taxes needed for the work. As such, the Contractor shall coordinate with the Procuring Entity for this part of the contract. This also includes the re-production of plans given by the University. The Contractor is in-charge for the signing of plans.
- D. INJURY TO PERSONS OR DAMAGE TO PROPERTY: The Contractor shall be responsible for all injury to persons and damage to property caused by the works or by the workmen. The Contractor shall be liable for any claims against the procuring Entity on account of such injury and/or damage.
The Contractor shall likewise take necessary precaution to protect the property

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of the Owner against rain or other inclemency of the weather or theft due to the performance of his work. The Contractor shall be liable for any such damage or loss.

- E. **TEMPORARY FACILITIES:** The Contractor shall make all arrangement and pay for the provisions of the necessary electricity and water supply required for the work and shall clear away all temporary installation before or upon completion of the work.
- F. **DEMOLITION AND PROTECTION OF EXISTING FACILITIES:** Protect existing work, structures, utilities, etc. which are to remain in place. Promptly remove all debris and other products of construction such as waste, dirt, garbage from the job site for the Contractor's account.
- G. **DISPOSAL OF MATERIALS:** All materials having salvage value shall be carefully removed to avoid damage and shall be placed in neat piles at a designated location. Approved salvaged materials shall be used in other works if found suitable; otherwise, these materials shall be disposed of in such a manner as to prevent damage to property, create unsightly conditions or obstruction.
- H. **STANDARD OF WORKMANSHIP:** The works shall be executed in a neat and workmanlike manner in accordance with the best practice employed in the industry. It shall include all the necessary work whether stated or not in the Specifications or Drawings to make the works complete and ready for use by the Procuring Entity upon turn-over.
- I. **STANDARDS OF MATERIALS/ PRODUCTS:** All materials and products shall be new and of the standard or premium products of reputable manufacturer approved by PPDO. Materials and products shall bear the trademark of the manufacturer. The approval shall not relieve the Contractor of the responsibility of inspecting such materials for defects or non-conformity of the specification.
Substitution of specified products shall have prior written approval of PPDO, after a written request from the Contractor for material substitution.
- J. **WINDSTORM PROTECTION:** The building roofs, walls and glass panels as well as other important structures are designed to withstand windstorm as per current local code.
- K. **EARTHQUAKE PROTECTION:** Refer to the Engineers' specifications.
- L. **FLOOD PROTECTION:**
 - a. The ground elevation of the building/s and other support facilities are above the flood level as confirmed from the relevant authorities.
 - b. The site drainage system is designed to levels higher than the adjacent creek/s if there is any.
 - c. No utilities and other support equipment are below flood level.
 - d. The fire pumps and associated equipment, if there are provisions, are not installed below flood level.
- M. **CONSTRUCTION MATERIALS GENERALLY:** The buildings should be of non-combustible construction throughout. This will include the floors, walls and internal partitions.
- N. **MECHANICAL VENTILATION SERVICES:** All works performed, equipment, materials and accessories supplied and installed for the complete mechanical ventilation system shall comply in every aspect with the rules, regulations and standards as per M&E specifications.

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- O. **COORDINATION WITH OTHER TRADES:** The Contractor shall examine and be familiar with the Specifications and Drawings of the Works and this Project Information Document. He shall arrange his work and dispose his materials so as not to interfere with the work or storage of materials of the other Trade Contractor.
Should the Contractor cause damage to any other Contractor on the work, the Contractor shall upon due notice settle with such Trade Contractor by agreement or arbitration. The Contractor shall be liable for any claims by other Trade Contractor against the Owner on account of such damage.
- P. **SUSPENSION OR DELAYS:** The Contractor shall not suspend or fail to make proper progress with the work without justifiable cause. In the event of delays or suspension of the work still persisting after written complaint, the Procuring Entity shall have the right to take over the work and all the materials on the site and make arrangements that are necessary to have the work completed by others.
- Q. **CLEANING:** The premises shall be kept at all times free from accumulations of waste materials or rubbish caused by the various portions of work. Maintain general cleanliness and sanitation of the site. The Contractor shall remove all unused materials, rubbish, etc. that have accumulated as a result of his work. At the completion of the project and before final turn-over, the Contractor shall leave the entire project site “broom clean”.
- R. **GUARANTEE:** The Contractor shall guarantee to make good any defects in the work of the project arising or discovered within one year after completion and acceptance of the project by the Procuring Entity.
- S. **SHOP DRAWINGS:** The Contractor shall submit to PPDO with such promptness as not to cause delay in his work or that of any Contractor two copies of all shop drawings and the schedule required by the work. The Contractor shall make any corrections required by PPDO and submit two corrected copies and other copies as needed.

6.00 SCOPE OF WORKS

The works shall include but not limited to the following principal items of work:

- A. All Structural members to be build shall be included through grid 1-3, grid 3-12 and grid 12-15 (Ground Floor Plan, Lower Level Bleacher Plan, Bleacher Plan, Roof Deck Plan) including bleachers seats and railings.
- B. All partition at ground floor
- C. Access/stairs on front, side and rear
- D. Plain cement finishing of walls and structural members.
- E. Roughing-ins for electrical, mechanical and electronics work.
- F. Millworks (doors and windows)

7.00 SUBMITTALS

The following are items for submission by the Contractor for PPDO’s approval prior to order, purchase, work or manufacture.

- A. Samples
 - 1. all specified sizes of steel reinforcement
 - 2. all specified sizes of angle bars
 - 3. aggregates

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4. all trims, mouldings, and frames
 5. waterproofing materials
 6. sealants
 7. corner sections of door and jambs
 8. aluminum framing for all framing of doors, windows and others
 9. mock up of aluminum doors and windows
 10. all finishing hardware
 11. glass panels and glazing compounds
 12. all pipes and fittings
 13. all toilet accessories, fixtures and trims
 14. mechanical roughing-ins
 15. all other architectural finishing materials
- B. Technical Catalogues and Brochures
- C. Detailed Shop Drawings
1. formworks when required
 2. reinforcing bar details and placements
 3. all metal works
 4. all fire rated exit doors
 5. all aluminum doors and windows
 6. all wood doors
 7. other needed detailed shop drawings
- D. Laboratory Test Certificates
1. compaction test on filling materials
 2. reinforcing steel
 3. concrete (based on mix for specified phases of pouring works)

8.00 PROJECT DURATION

- B. Time is a very important factor in the implementation of this project and as such, all works indicated in the plans, Specifications, BOQ and in this document shall be completed within receipt of the Notice to Proceed **336 calendar days**- inclusive of **46** calendar days as pre-determined unworkable as reflected in the Program of Work/Budget Cost.
- C. Before final acceptance by the end-user, the Contractor shall post a warranty security in accordance with the following schedule as prescribed in Section 62.2.3.3 of RA 9184 to cover warranty against structural defects to cover the following periods as follows in accordance with Section 62.2.3.2
- a) Permanent Structures (15 years)
 - b) Semi-Permanent Structures (5 years)
 - c) Other Structures (2 years)

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Form of Warranty Security	Amount of Warranty Security (Equal to percentage of the Total Contract Price)
a) Cash or Letter of Credit issued by a Universal or Commercial Bank: Provided, however, that the LC shall be confirmed or authenticated by a Universal or Commercial Bank, if issued by a foreign bank.	Five percent (5%)
b) Bank guarantee confirmed by a Universal or Commercial Bank.	Ten percent (10%)
c) Surety bond callable upon demand issue by GSIS or a surety or insurance company duly certified by the Insurance Commission as authorized to issue such security.	Thirty percent (30%)

- D. The contractor, before turning over the completed project to the University, shall clean the areas covered by the contract and dispose all construction debris and wastes and leave the area spic and span.

Prepared by:

ARSENIO P. GUILLERMO
Architect

FRANZ ELVIN T. PAJINAG
Civil Engineer

PHILIP D. PADRE
Civil Engineer

JACOB S. SANTILIAN
Electrical Engineer

DENNIS CLYDE G. ACANTILLADO
Mechanical Engineer

WILSON R. DULDULAO
Professional Electronics Engineer

AIDA V. CABANG
Chief, Physical Planning Section

ROMEO R. DULDULAO
Director, PPDO

DIVISION 2 - EARTHWORKS

SECTION 020: CLEARING OF THE SITE

1.00 GENERAL

1.01 S C O P E

Furnish equipment and perform labor required to complete:

- A. Gravel bedding at locations indicated in the plan.

1.02 EXAMINATION OF SITE

Visit the site of the work and examine the premises to fully understand all existing conditions relative to the work. No increase in cost or extension of performance time will be considered for failure to verify and know actual site conditions.

1.03 REPAIRS

Repair damages done to property of any person or persons on or off the premises, by reason of required work for Demolition, Clearing, and Grubbing.

1.04 RESPONSIBILITIES

- A. The Contractor shall be liable and hereby assumes full responsibility for and shall hold the Procuring Entity free and harmless from any and all claims arising out of or in connection with any injury or damage that may be sustained by any person or property in carrying out the works contracted for under this Agreement.
- B. Damage caused by the Contractor, whether by accident or negligence in connection with the work on any of the Procuring Entity's properties shall immediately be made good at the Contractor's expense, and in the event the Contractor fails or neglects to do so, the cost of such damages shall be deducted from any payment due the Contractor.

1.05 STAKES AND BATTER BOARDS

- A. Stake out building accurately and establish grades.
- B. Batter boards and reference marks shall be erected at location where they will not be disturbed during construction.
- C. Construct two permanent benchmarks of previously known elevations near the site of construction.

1.06 EXCAVATION

- A. The Contractor shall make all necessary excavations for foundations to grade indicated on the drawings without extra compensation, including all other excavations for drainage, sewer and water service systems required and necessary for the proper

prosecution of the work.

- B. Trim excavation bottoms to required lines and grades. Include incidental excavation to level the bottom of footing, compacting and tamping same.
- C. The materials to be excavated shall include any rock, earth and other materials of every nature and description encountered in obtaining indicated lines and grades, which can be loosened, removed by hand tools or with proper shovels; assuming that all excavations to indicate lines and grades can be done by the aforementioned means.
- D. Protection, Pumping, Maintenance, Etc. The Contractor shall, at all times, protect the excavation and trenches from damage.

1.07 BACKFILLING AND COMPACTION

- A. Backfill around structures only after concrete walls have attained full design strength to resist lateral pressure resulting from backfill and/or as directed by PPDO.
- B. Remove all forms, trash and debris prior to backfilling around structures.
- C. Use only approved, free from waste and objectionable matter backfill materials from excavations.
- D. All exterior grade shall be formed in accordance with drawings and specifications.

1.08 DISPOSAL OF EXCAVATED MATERIAL

Surplus materials resulting from all earthworks operations not required or unsuitable for fill or backfill shall be disposed off by the Contractor at his expense in areas off site provided by the Contractor.

3.09 UTILITIES

- A. The Contractor shall protect and maintain all conduits, drains, sewer pipes and other utility services (if there is any) that are to remain on the property or in the site where required for the proper excavation of the work.
- B. The Contractor shall notify all corporations, companies, individuals or other authorities concerned with the above conduits, drains, sewer pipes, and other utilities (if there is any), running to the property or site and protect, relocate, remove or discontinue all pipes, sewer and other utility services which interfere with the excavation of the work in accordance with the instruction and requirements of the above parties.

DIVISION 3 – PLAIN AND REINFORCED CONCRETE WORKS

SECTION 030: CONCRETE

1.00 GENERAL

1.01 SCOPE

- A. Furnish material and equipment and perform labor required to complete cast-in-place and finishing of concrete of all plain and reinforced concrete as shown on the drawings and as specified herein.
- B. Refer to the General Notes and Specifications prepared by the Civil and Structural Engineer.

1.02 STANDARD SPECIFICATIONS AND CODES

Works shall be governed by the National Structural Code of the Philippines (NSCP) 2015 edition Vol. I- Building, Towers and other vertical structures.

1.03 SUBMITTAL

- A. Samples: Submit samples of cement and aggregates proposed for exposed architectural concrete work for approval, labeled with names, sources and descriptions of material.
- B. Mill Certificates: Furnish two copies of manufacturer's certificates of mill tests of all reinforcing steel.
- C. Shop Drawings: Each reinforcing steel detail and placement drawings shall be submitted for approval in accordance with the requirements of the General Conditions. Any material fabricated before final approval of the shop drawings will be done at Contractor's risk, but no material shall be placed until shop drawings have final approval by PPDO. Shop drawings shall be in accordance with the the ASEP Guide to Earthquake Resistant Design of Structures, latest edition.

D. Reports

- a. **Submit schedule of pours and location at least three (3) days prior to date of pouring for approval.**
- b. **Submit three copies of mixed design and test results.**

1.04 LABELLING OF REINFORCING BARS

Bars shall be properly labeled with weather proof tags to facilitate identification.

1.05 TESTING OF REINFORCING BARS

Tests shall conform to ASTM Designations of specified materials. Testing shall be by an approved independent material agency. Samples of materials for testing and testing shall be provided by Contractor without additional cost to Procuring Entity Copies of the results shall be furnished to the Procuring Entity, PPDO and TWG.

1.06 TESTS FOR FRESH CONCRETE

Prior to concrete pouring, slump tests shall be undertaken, to determine the consistency and workability of fresh concrete. The Contractor is advised to produce concrete design that will conform to the minimum slump test standard.

1.07 DESIGN STRENGTH OF CONCRETE

All strengths of concrete shall be as indicated on Construction Notes and Structural Specification. All concrete specimens shall be tested for compressive strength by a reputable third party Accredited Materials Testing Laboratory and as required by RA 9184 Annex E 11.1.

1.08 INSPECTION

PPDO shall be notified in advance to provide ample time for inspection of reinforcing steel bars before any mixing and placing of concrete is commenced.

2.00 PRODUCTS

2.01 MATERIALS

- A. Forms: Use marine plywood with phenolic film panels, metal or surfaced lumber forms where it will best give the most advantage in the specific concrete work involved or as shown.

Forms shall be designed and constructed to facilitate easy removal without damage to textured concrete surfaces, free of offsets and square corners true to the lines and profiles as detailed, with a minimum number of joints, subject to PPDO's approval.

B. Reinforcing Steel Bars

- a. Shall be new and free from rust, oil, grease, scale, defects or kinks or other coating which will impair the bond.
- b. Shall conform to the latest edition of ASTM Designation A615 Specification for Deformed Billet Steel Bars for Concrete Reinforcement.
- c. Grade of reinforcing steel shall be as indicated in the construction notes and structural specifications.
- d. Accessories: Provide bar supports and other accessories necessary to hold bars in proper position while concrete is being placed. Bar supports which come in contact with forms for concrete exposed to view in the finished structure shall be galvanized. Bar supports are subject to approval of PPDO.

C. Cement

- a. Portland cement shall conform to ASTM C-150 or C175: Standard Specifications for Portland Cement and of the American Society for Testing Materials and subsequent standards, thereof, to meet local conditions.

D. Fine Aggregates

- a. Fine aggregates used in the composition of concrete, mortar, grout or plaster shall consist of natural sand, stone screenings or other inert materials with

similar characteristics or a combination thereof, having clean, hard, strong, durable, uncoated grains, and free from injurious amounts of dusts, lumps, soft and flaky particles, shales, alkalis, organic matters, loams or clays.

- b. All sand to be used shall have the local designation of S-1 or first class washed sand with greenish exterior color tone, sharp, fine and hard.

E. Coarse Aggregates

- a. Coarse aggregates shall consist of crushed stones, gravel, or other approved inert materials with similar characteristics or a combination thereof, having clean, hard, strong, durable, uncoated particles, free from injurious amounts of soft friable, thin, elongated or laminated pieces, alkalis, organic or deleterious matters, soft stones, limestones or stones having a distinct cleavage are not allowed. All coarse aggregates to be used shall have the local designation of G-1 first class machine crushed stone gravel.
- b. Coarse aggregates shall be well graded as to size, ranging from 0.3 millimeters (1/8") up to a size which will readily pass between all reinforcing bars and not to exceed 18 millimeters (3/4") in size for reinforced beams, columns, floor slabs and others.

- F. Water used in mixing concrete shall be clean and free from injurious amounts of oils, acids, alkalis, salts, organic, matters or other substances that may be deleterious to concrete or steel.

2.02 CONCRETE PROPORTIONS AND CONSISTENCY

A. Cement and Aggregate

The Contractor shall employ a design mix as required and in accordance with the requirement of the specifications and drawings

Make proportions so as to produce a concrete mixture which will work readily into the corners and angles of the forms and around reinforcement with the method of placing materials to avoid segregation or accumulation of excess free water on the surface.

If at any time during construction, the concrete resulting from approved mix designs proves to be unsatisfactory for any reason, such as too much water, lack of sufficient plasticity, or insufficient strength, the Contractor shall immediately notify PPDO.

B. Measurement

- a. Measure concrete materials such that the proportions can be accurately controlled and easily checked at any time during work.
- b. Conform measurement of materials for ready mixed concrete to Standard Specifications for Ready Mixed Concrete.
- c. Allow job mix adjustment of water content only on permission of PPDO and TWG provided that cement is also added to keep the original water content ratio of the design mix.

Limit slumps to the following:

Portion of structure	Slumps (millimeters)
Columns, beams, girders slabs	50 mm. – 150 mm.
Foundation elements, bedded slabs and cantilevered beams and slabs	

2.03 MIXING CONCRETE

- A. Ready Mixed Concrete: ASTM C-94 and as herein specified.
 - a. All ready-mixed concrete shall be placed in forms within one hour after adding water or not more than 1-1/2 hours if a retarder is used. It shall be kept constantly agitated during the transit period.

3.00 EXECUTION

3.01 PREPARATION

- A. FORMS

- a. Check all forms to conform to the shape, lines, dimensions of the members as called for in the plans. The forms shall be substantial and designed to resist the pressure and weight of the concrete, and be properly tied and braced or shored to maintain position and shape.
 - b. Check all formwork for plumbness and correct alignment.
 - c. Provide openings in column forms for cleaning and inspection preferably at lowest point of pour lifts immediately before depositing concrete.
 - d. Always provide continuous vertical supports for framework directly below pour line.
 - e. Coat forms with approved form oil before reinforcement is placed. Remove all surplus oil on form surfaces.
- B. REINFORCING STEEL BARS**
- a. Before placing reinforcement and before pouring of concrete, remove all loose rust, mill scale, oil or other adhering materials which tend to reduce or destroy bond between concrete and reinforcement.
 - b. All bars shall be bent cold. Bends for stirrups and ties shall be made around pins with a diameter of at least twice the thickness of the bars; for bars 25 millimeters and smaller, six times the thickness; for larger bars, eight times the thickness.
- C. CAST-IN-PLACE CONCRETE**
- a. Inspect and clean all forms and check installations before placing concrete.
 - b. Wet surfaces thoroughly and grout before placing concrete.
 - c. Clean all laitance from previous pouring and possibly expose aggregates before pouring.
 - d. Inspect completeness and correct locations of embedded items.

3.02 STRIPPING AND RESHORING OF FORMS

- A. Remove forms only upon approval of PPDO/TWG in such a manner and at such times to insure the complete safety of the structure. In no case shall the supporting forms

and shorings be removed until the members have attained sufficient strength to support safely their weight and load thereon. Forms and supports shall remain in place for a minimum time of:

columns	3 days
walls and vertical surfaces	2 days
beams and slabs	14 days
sides of beams and girders	2 days

- B. Exercise due care while stripping forms and protect corners subsequently against shipping or other damage by approved means.
- C. The results of suitable control tests shall be used as evidence that the concrete has attained sufficient strength to permit removal of shorings and supporting forms. Cylinders required for control tests shall be made in addition to those required by this document.
- D. Reshore immediately after stripping slabs, beams and girders that support subsequent formworks. Retain reshores for as many levels as required to combine the live load capacities of cured floors to support the loads of the subsequent fresh construction and construction loads.

3.03 PLACING REINFORCEMENT

A. Metal Reinforcement

- a. Placing shall be according to plans furnished. Refer to PPDO in case of doubt in placing steel.
- b. Reinforcing bars shall be accurately placed and adequately secured with concrete metal wires, metal chair spacers, ties, anchors or other accessories to prevent displacement by construction loads or the placing of concrete.
- c. All non-stirrups shall be held in place by the two No. 4 spacer bars unless otherwise shown in the drawings.
- d. Reinforcement shall not be bent after being embedded on hardened concrete unless otherwise permitted by PPDO.

- B. Bar Spacing shall be done in accordance with the NSCP:
 - a. Clear distance between parallel bars shall be 1-1/2 times the diameter of the bars.
 - b. Clear distance shall not be less than 1-1/3 times the maximum size of aggregates, nor less than 25 millimeters.
 - c. Where bars are used in two or more layers, the bars in the proper layers shall be placed directly above those in the lower layers at a clear distance of not less than 25 millimeters.

3.04 OFFSET AND SPLICE IN REINFORCEMENT

- A. Splices
 - a. Generally, avoid splices in slabs, beams and girders at points of maximum stress. Splices may be allowed only upon written approval of splice details by PPDO or as shown or noted in the plans.
 - b. Splice length shall follow the requirement of ASEP Guide to Earthquake Resistant Design of Structures latest edition and Sec. 418- Earthquake Resistant Design of NSCP 2015 ed. Vol. I.
 - c. Splices in adjacent bars shall be staggered by a minimum distance of 40 bar diameters.

3.05 CONCRETE COVER

Minimum protective covering shall be as indicated on the Construction Notes and Structural Specification and shall conform to Section 420.6.1.3 specified concrete cover requirements Table 420.6.1.3.1 of NSCP 2015 ed. Vol. I.

3.06 DEPOSITING CONCRETE

- A. Do not start placing of concrete until the forms and reinforcements for the whole unit to be poured have been completed, cleaned, inspected and approved.
- B. Do depositing without segregation, rehandling or buggies, buckets or wheelbarrows. Never allow use of chutes except to transfer concrete from hoppers to buggies, wheelbarrows or buckets in which case shall not exceed six meters in aggregate length.
- C. Place immediately after mixing, and in no case more than 90 minutes after water has been added provided a retarder is used. In placing concrete, never drop it freely for a height exceeding 1.5 meters. Deposit in uniform, horizontal layers not more than 450 millimeters deep, work around all reinforcing and in corners of forms.
- D. Keep conveyors full of concrete and keep ends buried in the newly placed concrete as pouring progresses. Properly paddle by the use of rods, shovels and hand spades, and agitate by means of internal and/or external vibrators to obtain the best possible concrete without over-vibration to the point where separation results. Continue depositing of concrete until the completion of the section or unit, and in no case suspend the pouring of a section once started, for more than 30 minutes.
- E. Concrete, upon approval, may be placed without the use of vibrators. In this event, place the concrete in layers of not more than 300 millimeters in thickness and spade, tamp, and agitate by other means of obtaining the same results as by vibrating.
- F. Construction Joints
 - a. Do concreting continuously, until section is complete. When stoppage of concrete operations occur, place construction joints either horizontally or vertically where it will not impair the strength of the structure or as indicated by PPDO. Provide shear keys or dowels to develop bond.
 - b. Roughen and clean construction joints. Wet and slush with cement mortar or grout just before placing of new concrete.
 - c. Consult drawings and/or PPDO as to the details of construction joints. Construction joints shall be located at $L/3$ of reinforced concrete beams and slabs and at clear height divided by $6(h_c/6)$ or 600 mm. whichever is larger below bottom of reinforced concrete beams for reinforced concrete columns.

3.07 CURING CONCRETE

- A. Finished Surface: Protect all concrete works from drying out after removal of forms by covering with waterproofed paper, polyethylene sheeting, burlap or coating of approved membrane curing compound with moisture retention property equal to 90 percent based on ASTM C-156, applied in accordance with the Manufacturer's instructions.

Wet burlap as often as required to keep concrete wet throughout each day for a period of, at least, seven days where normal Portland cement is used.

Protect freshly placed exposed concrete from rain and the element by tarpaulins at all times.

- B. Begin curing as soon as concrete has attained initial setting after 6 hours.
- C. Spray floors and vertical surface with an approved curing compound. However, membrane curing compound shall not be used where floor hardener, resilient floor tile or other applied finishes or surface treatments are to be subsequently applied.

3.08 SLAB FINISHES

- A. Prepare slabs suitable in surface and elevation to receive finishes. Finish floor and roof slabs shall be level, plane surfaces unless otherwise indicated on the drawings, with a tolerance of three millimeters in 250 millimeters; surface shall be pitched to drains as required.
- B. Types of Finishes:
 - a. Resilient Floor, Granite Tile: Base slabs which are to receive these finishes requiring "thin-set" installation shall be floated and troweled with a steel trowel to provide a smooth surface as required to receive flooring.
 - b. Roof slab: water-proof membrane-type
 - c. Epoxy Flooring on plain cement finish

3.09 TEST OF CONCRETE

The Contractor shall employ, at his own expense, an approved and independent testing laboratory which shall make the tests and immediately submit five copies of mixed designs and test reports to PPDO for approval before any concrete is placed.

The following tests shall be made for each 75 cubic meter of concrete or fraction thereof, but not less than one set for each day's pour. All three tests shall be made from the same batch.

- A. Compression Tests: Test in accordance with ASTM C-31 and C-39. Test one cylinder at the age of seven days, two cylinders at 28 days and one cylinder in reserve for 56 days test if 28 days does not meet the requirements. Make additional cylinders as required to check strength of concrete in construction. These cylinders are to be cured in the field in the same manner as the concrete in the construction are cured.
- B. Slump Tests: ASTM C 143. Keep a slump cone at the site at all times.
- C. Tests Reports: The testing laboratory shall submit four copies of its test cylinder reports which are to include as far as applicable, the following items: Location of pour in the structure, concrete design mix number, concrete design strength, type and manufacture of cement, amount of any admixture used (if any), slump tests, date of sampling, cylinder identification number, days cured in field, days cured in laboratory, age at time of testing, crushing stress, type of failure, who made the cylinders at the laboratory, and whether concrete strength meet specifications.
- D. Inspection of batch plant operation on a "spotcheck" basis as required to insure that concrete delivered to the job complies with the specifications and the design mix.
- E. Additional tests: If, in the opinion of PPDO and TWG, based on the cylinder strengths below specification requirements or visual defects, concrete of poor quality has been placed, additional tests shall be made as directed by PPDO and TWG and at the expense of the Contractor. Tests may be compression tests on cured cylinders, ASTM C 42, and/or load tests as outlined in ACI 318, section 202, or as directed.

The average strength of 3 concrete cylinder specimens representing each class of concrete shall be equal to or greater than the specified strength and not more than one specimen shall have a strength more than 3.5 mPa below the specified design compressive strength.

Where tests fail to give the required strength, the Owner shall have the right to order a change in the proportions of the concrete or in the procedure of curing for the rest of the structure.

3.10 FAILURE OF TEST SAMPLES

In any case of failure to meet specified strengths, the Contractor may, at his expense, perform rebound hammer test and obtain concrete core samples from the poured concrete and have their compressive strength determined by a competent testing authority which shall be taken as a conclusive evidence of its strength and integrity,

provided the cores will not impair the safety of the structure and can be satisfactorily replaced.

To determine adequacy of the structure, the Procuring Entity shall have the option to order load tests on parts of the structure where concrete strength tests are below 80% of those specified. These tests are to be done in accordance to ACI 318-17 and/ or NSCP Sec. 427 recommendations, and the costs are to be borne by the Contractor.

Demolition and concrete replacement if recommended by PPDO and TWG shall be borne by the Contractor or the Contractor may be required to prolong the curing of the poured concrete as directed by PPDO and TWG, in addition to payment of the liquidated damages.

3.11 LIQUIDATED DAMAGES for FAILURE to MEET CONCRETE REQUIREMENTS

For strength of concrete obtained on molded or drilled test specimen less than those required on Item 3.09 TEST OF CONCRETE of this section, the Contractor shall pay to the Procuring Entity as liquidated damages, and not as a penalty or forfeiture, the following percentage of the proposed unit prices per cubic meter for the quantity of concrete directly and indirectly affected by the failure to meet strength requirements regardless of whether or not analysis of test results show that the concrete in place can still safely carry the design loads:

- A. For concrete less than 100 percent but greater than 90 percent of specified strengths, payments shall be 20 percent of the total concrete per cubic meter.
- B. For concrete less than 90 percent but greater than 80 percent of specified strength, payment shall be 50 percent.
- C. For concrete less than 80 percent of the specified strength, removal of the concrete so deposited and replacement of same at the expense of the Contractor.

3.12 GUARANTEE - WATER TIGHT CONCRETE

Guarantee all waterproofing on deck roofs or where called for in plans to be absolutely waterproofed and free from leakage of a period of ten years. Should any leakage develop in these items, they shall be made waterproofed by approved waterproofing methods and materials and these shall be repeated, necessary until all leakage has been stopped. Guarantee shall extend to full **ten years** after last leak has stopped.

- A. All vertical construction joints in such walls shall be locked and keyed, the channels

being not less than 75 millimeters deep, including joints where waterstops are required. These joints shall be bonded and absolutely tight.

- B. All piping under slabs must be completed before slab is poured.

DIVISION 4 – MASONRY

SECTION 040: M O R T A R

1.00 GENERAL

1.01 SCOPE

Furnish materials and equipment and perform labor required to complete all plaster work, masonry work, patching and filling mortar as shown or indicated in the drawings.

1.02 MIXES

Cement Mortar shall consist of homogeneous mixture of:

1 part Masonry or Portland cement and 2 parts sand, but not more than:

1 part Masonry or Portland cement and 3 parts sand

1.03 SLUMP

Cement Mortar shall have a minimum slump of 100 millimeters and a maximum slump of 150 millimeters.

1.04 GROUT

- A. Fine grout shall be mixed using one part Masonry or Portland cement and three parts sand for grout spaces less than 50 millimeters in any horizontal dimension and in which clearance between reinforcement and masonry is less than 20 millimeters.
- B. Coarse grout shall be mixed using one part Masonry or Portland cement, three parts sand and three parts pea gravel passing a 10 millimeters sieve for grout spaces 50 millimeters or greater in all horizontal dimensions and in which clearance between reinforcement and masonry is more than 20 millimeters.

SECTION 041: CONCRETE UNIT MASONRY

1.00 GENERAL

1.01 SCOPE

- A. Furnish materials and equipment and perform labor required to complete concrete unit masonry.
- B. Include building-in of necessary items supplied by other trades as shown or indicated in the drawings. Include all necessary accessories.
- C. See drawings and details for location, extent and other requirements.

1.02 VISUAL INSPECTION

- A. All units shall be sound and free from cracks or other defects that would interfere with the proper placing of the unit to impair the strength or permanence of the construction.
- B. Units that are intended to serve as a base for plaster shall have a sufficiently rough surface to afford good bond.

1.03 CLEANING

- A. Clean down with dry brushing.
- B. Leave all work clean and free from mortar splashes. Hose down and brush off efflorescent deposits. Remove timer stains with 10 parts water to 1 part dilute hydrochloric acid then hose down.
- C. Wash finished surface in a manner most appropriate and satisfactory.

DIVISION 5 – WOOD

SECTION 060: CARPENTRY AND MILLWORKS

1.00 GENERAL

1.01 SCOPE

Furnish materials, hardware, accessories and equipment and perform labor required to complete, ready for use, wall panels, wood trims and architraves, wood doors and related carpentry work as indicated on the drawings and specified herein. Coordinate work with all other related trades.

1.02 STORAGE AND PROTECTION

- A. Protect lumber both in transit and at the jobsite from elements. Material shall not be delivered unduly long before it is required for the proper conduct of work.
- B. Protect millwork against dampness during and after delivery.
- C. Do not bring in interior finish, including doors, into building until plaster is thoroughly dry.
- D. Protect all finished woodwork from injury after it has been set in place until completion and final acceptance of the work.

2.00 PRODUCTS

2.01 MATERIALS

- A. Wood Panel Doors must be manufactured, solid, hard, free from imperfections. All panels shall be end-sealed before assembly.
- B. Wood trims and architrave, provided on wood panel doors as indicated on plans and specifications.
- C. Compact Board: high grade of fine wood chips fibers solidly and homogeneously compacted with special resins. Thickness and finish as per detailed drawings and specifications. Use High Moisture Resistant boards at areas with high humid conditions such as kitchens and toilets.
- D. Rough Hardware and Metal Fasteners: Plates, straps, nails, screws, spikes, bolts, joists, hangers, rods, dowels, fasteners and miscellaneous iron and steel items shall be of sizes and types to rigidly secure member in place.
- E. Assembly Materials: Water resistant glue, nails, screws, bolts or appropriate type, shape and size for all joints.

DIVISION 6 - THERMAL & MOISTURE PROTECTION

SECTION 070: WATERPROOFING

1.00 GENERAL

1.01 SCOPE

- A. Furnish materials and equipment and perform labor required to complete waterproofing works.
- B. See drawings and details for location and extent of requirements.

1.02 SUBMITTAL

- A. Samples: Submit to PPDO samples of materials to be used clearly labeled as to brand name and manufacturer's name and secured approval.
- B. Manufacturer's Instructions: Submit to PPDO the Manufacturer's complete printed instructions for the application of the material.
- C. Warranties: Upon completion, submit to PPDO written warranty that the waterproofing is effective for a period of Ten Years (10).

1.03 DELIVERY AND STORAGE

- A. Deliver waterproofing materials to the site in original sealed containers or packages bearing the manufacturer's name and brand designation, specification number, type and class.
- B. Store and protect waterproofing materials from damage, weather moisture and extreme temperature with extraordinary care.

2.00 PRODUCTS

2.01 MATERIALS

- A. Waterproofing cement-based material at Balcony and built-up and preformed membrane at Roof deck level shall be used as waterproofing materials for the project.

3.00 EXECUTION

3.01 GENERAL

- A. Clean, free from holes and projections, smooth and dry all surfaces to receive waterproofing materials. The Contractor shall perform the necessary surface preparation. Immediately before application of waterproofing, clean surfaces and secure approval. No application of waterproofing shall be permitted in wet weather.

3.02 SURFACE PREPARATION

The concrete surface shall be troweled, smooth, firm, dry, clean and free of rubbish, loose or foreign materials, without any projections, indentations, and other imperfections.

3.03 TOPPING AND LINING

Thickness as indicated in the drawings. Slope towards the drain.

3.04 APPLICATION

As per manufacturers written instructions.

3.05 TESTING

Flood test all applicable waterproofed areas prior to acceptance of the job. Plug all drains, build temporary dams at openings that water will be 25 millimeters deep at the high point of the waterproofed area. Maintain the water for at least 24 hours. Remedy any evidence of leakage at once.

3.06 CURING

Where curing of waterproofing is required, cure strictly in accordance to the manufacturer's specifications. Allow foot traffic only after complete curing.

3.07 CLEANING AND INSPECTION

Clean and clear all debris at site including tools and equipment prior to final inspection.

3.08 PROTECTION

Do not allow traffic on coated surfaces until completely cured after completion of application.

3.09 GUARANTEE

The Contractor shall guarantee all waterproofing works to be free from defects in materials and in workmanship and free from leaks for a period of ten years from the date of final acceptance.

SECTION 071: CAULKS AND SEALANTS

1.00 GENERAL

1.01 S C O P E

- A. Furnish materials and equipment and perform labor and services necessary to complete application of caulks and sealants for expansion joints, construction joints, window sills, etc.
- B. See drawings and details for location and extent of requirements.

1.02 DEFINITION

The term "waterproof" shall mean resistant to penetration of water from rainfall.

1.03 SUBMITTALS

Warranties: Upon completion, submit to PPDO written warranty that the waterproofing installed is effective for a period of five (5) years.

2.00 PRODUCTS

2.01 MATERIALS

- A. Sealing around windows, glazing, and bedding: structural silicone sealant.
- B. Perimeter caulking of sanitary fixtures, interior and exterior electrical and mechanical fixture.
- C. Perimeter caulking of interior and exterior Electrical and Mechanical Fixtures.

2.02 CLEANING

The surface adjoining caulked and sealed joints shall be cleaned of all smears and other soiling.

2.03 GUARANTEE

The application shall guarantee the installation against poor workmanship for a period of five years from the date of acceptance by the Procuring Entity. The Contractor shall make all necessary repairs at his expense during that period. Manufacturer shall guarantee material against moisture penetration for five years.

DIVISION 7 – DOORS & WINDOWS

SECTION 080: ALUMINUM DOORS and WINDOWS

1.00 GENERAL

1.01 SCOPE

- A. Furnish materials, accessories and equipment and perform labor required to complete aluminum frames for doors and windows.
- B. See drawings and schedules for size, details and location of required work.

1.02 SUBMITTALS

- A. Submit for approval of PPDO and end user, materials and shop drawings of fabricated items showing sizes of all members, details of connections, fabrications and installation.
- B. Submit sample corner sections, hinges, tracks, handles and all other accessories.
- C. Secure approval prior to commencement of fabrication work.

1.03 DELIVERY AND STORAGE

- A. Inspect materials delivered to the site for damage.
- B. Store materials neatly, properly stacked on non-absorptive strips or wood platforms.

2.00 PRODUCTS

2.01 MATERIALS

- A. Sections as indicated and manufactured or fabricated.
- B. Aluminum Framed Tempered Glass Doors (12 mm.): Refer to Door and Window Schedule
- C. Aluminum Framed Tempered Glass Windows (12 mm): Refer to the Door and Window Schedule.
- D. Aluminum Sandwich Panel Doors and Panel Doors with Vision tempered Glass (10mm.thk.)
- E. Aluminum paint: extruded aluminum with powder-coated color as per PPDO and end

users' color choice.

- F. Fasteners:
 - a. Exposed Fastening: aluminum, countersunk stainless steel head screws, or other non-corrosive material.
- H. Finish hardware:
 - a. Door hardware: Must be of heavy duty materials. Refer to the Door Schedule.
 - b. Sliding Windows: stainless steel cam latch. Provide with complete track and carrier assembly, stops, guide and pulls.
 - c. Awning: Locks must be properly and securely provided with heavy duty hinges.
- I. Weather stripping: Vinyl/Mohair: Must be properly provided where it is needed.
- J. Glass: See Door and Window Schedule.
 - a. Doors: 10 mm. thk glass
 - b. Windows: 12 mm. and 10 mm thick glass analok frame.

3.00 INSTALLATION

- A. Set and anchor frames as shown in details and approved shop drawings.
- B. Set frames plumb and square and brace where necessary to prevent distortion. Set frames without springing, forcing or distorting the product.

3.01 BREAKAGE AND FAULTY INSTALLATION OF GLASS

- A. Glass breakage caused in executing the work or by faulty installation shall be replaced by the Contractor at his own expense.
- B. Improperly set glass which does not fully meet requirements for its grade shall not be accepted and shall be replaced by the Contractor at his own expense.
- C. Lost and damaged materials shall be replaced by the Contractor at his own expense.

3.02 ADJUSTMENTS

Adjust all frames and attach hardware before glazing. Secure all windows and doors to be watertight and all hardware operating free and easy.

3.03 HARDWARE

Install hardware to fit details as shown in the drawings and as per manufacturer's specifications with screws to match the finish. Supply all necessary templates and instructions required.

3.04 CLEANING

- A. All glass shall be cleaned of any extraneous materials and washed by the Contractor, using materials and methods recommended by the glass manufacturer before final acceptance and occupancy.
- B. Upon completion and installation, thoroughly clean surfaces of windows and frames in accordance with the recommended method of the manufacturer.

DIVISION 8 - FINISHES

SECTION 090: PLAIN CEMENT FLOOR FINISHES

1.00 GENERAL

1.01 SCOPE

- A. Furnish materials, equipment, and perform labor necessary to complete all cement finishes.
- B. See drawings for details and location of work required.

2.00 PRODUCTS

2.01 FINISHES

Plain cement floor finish: Consisting of the scratch and finish coats, with areas topped with epoxy flooring as reflected in the plans and specifications.

DIVISION 9 – BLEACHERS AND RAILINGS

BLEACHERS - HEAVY DUTY SECTION 13125

PART 1 - GENERAL

1.1 - SYSTEM DESCRIPTION

- A. Design and fabrication of continuous angle frame bleacher units.

1.2 - QUALITY ASSURANCE

A. Manufacturer Qualifications: Manufacturer must have a minimum of 10 years of experience in the

design and manufacture of bleacher and bleacher systems. Welders shall be AWS certified.

B. Source Quality Control: Mill Test Certification.

C. The owner will supply the manufacturer with all state, local, and ADA codes and regulations.

1.3 - SUPERIOR PRODUCT FEATURES

- **ALL WELDS ARE COMPLETELY SEALED WELD JOINTS.**
- **LAST ROW ON ALL FRAMES ARE 3" STRUCTURAL ALUMINUM CHANNELS.**
- **ALL STRUCTURAL PARTS ARE ACID CLEANED FOR OUTSTANDING APPEARANCE.**
- **SERRATED FLANGE HARDWARE IS USED TO PREVENT LOOSENING.**
- **TWO LINE RAIL SYSTEM WITH ALUMINUMIZED 9 GA. CHAIN LINK FENCE.**

1.4 - WARRANTY

AMERICAN ALUMINUM SEATING warrants its bleacher products to be free from defects in materials and workmanship for a period of five (5) years beginning with the date the product is completed at the job site. Product installation can be performed by factory trained personnel or by the customer personnel following the detailed assembly instructions of the manufacturer. This warranty excludes all other defects resulting from abnormal use or abuse, accidental damage or any occurrences beyond the manufacturers control.

PART 2 - PRODUCTS

2.01 - ACCEPTABLE MANUFACTURER

A. American Aluminum Seating, Inc.

2.2 - STANDARD BLEACHERS

A. Product Description. Standard design parameters below. Custom design always available.

1. Vertical Rise Per Row - 8 Inches. (Options available)
2. Horizontal Depth Per Row - 24 Inches. (Options available)
3. Seat Height - 17 to 17 1/2 Inches above its respective tread or walking surface.
4. Framework - Welded angle frames located at a maximum distance of 6 feet and connected by angle cross braces.
5. Seats - Nominal 2 x 10 anodized aluminum (4)-leg plank. (9.5 x 1.50 x .102) (Options available)
6. Treads - Nominal 2 x 10 mill finish (4)-leg plank. (9.5 x 1.50 x .102) (Options available)
7. Semi-closed and closed decks available.

8. End Caps - Anodized aluminum channel caps.
9. Risers - 8 Inch (Options available)
10. Joint Sleeve Assemblies - Required on some larger continuous bleacher units to align planks.
11. Steps - Custom designed welded frames using 2 x 12 mill finish plank.
12. Security Guard rail Systems - Two-line rail system which incorporates the use of chain link fence (aluminized) for maximum safety.
13. ADA accommodations and exit ramps as required.
14. Elevated walkways from 30" and up in 6" increments.

B. Materials and Finishes.

1. Framework - Aluminum Alloy 6061-t6 structural materials with mill finish. Last row vertical member is heavy aluminum channel for added strength. All welding is seal welded to eliminate moisture infiltration.
2. Extruded aluminum - Planks are aluminum alloy 6063t6. Seats are anodized 204R1.
3. Joint sleeves - Aluminum alloy 6063t6.
4. End Caps - Aluminum alloy 6063t6 and anodized.
5. Hold-down Clips - 4-Way adjustable aluminum alloy 6063t6
6. Hardware - Cadmium or zinc plated, grade 5 or better. Serrated locking flange nuts.
7. Guardrail Pipe - 1.900 o.d. anodized.
8. Fence Fabric - 9 Ga. Wire, Aluminized finish after galvanizing.

C. Design Loads. Normal design loads. Exceeded in all cases.

1. Live Load - 100 PSF gross horizontal projection.
2. Lateral Sway Load - 24 PLF seat plank.
3. Perpendicular Sway Load - 10 PLF seat plank.
4. Wind Load - 30 PSF vertical projection.
5. Live Load of seat and foot plank - 120 PLF.
6. Guardrail system - 100 PLF vertical and horizontal load.

D. Certified structural designs sealed by a licensed structural engineer are required.

PART - EXECUTION

3.1 - INSTALLATION

1. Owner shall use factory trained installer.
2. Owner shall install the bleacher unit in accordance with the manufacturer's detailed installation procedures.
3. Factory trained site supervision available for an additional fee for complex projects.

DIVISION 10: PLUMBING WORKS

SECTION 100. PLUMBING

1.00 GENERAL

1.01 SCOPE

This item shall consist of furnishing all materials, tools, equipment and fixtures required as shown on the plans for the satisfactory performance of the entire plumbing system including installation in accordance with the latest edition of the National Plumbing Code, and specifications. The contractor shall provide samples on all materials to be installed, subject for approval of the end user, Technical Working Group and Project in Charge. This item also includes the construction of two-unit septic tank as indicated in the approved plans and specifications. Tapping of sewer lines to the septic tanks shall also be done by contractor.

1.02 SUBMITTALS

- A. Submit samples of proposed materials for Architect's selection and secure approval.**
- B. Submit as built plan upon completion of plumbing works. For repair and maintenance purposes.**

2.00 PRODUCTS

All piping materials, fixtures and appliances fitting accessories whether specifically mentioned or not but necessary to complete this item shall be furnished and installed. Pipes shall be of quality made by reputable manufacturers free from defects, and shall be true, smooth and cylindrical. Pipes and fittings for Sanitary lines shall be Unplasticized Polyvinyl Chloride Series 1000. Pipes and fittings for Water lines shall be Polypropylene (PP-r) PN20.

2.01 PLUMBING AND RELATED FIXTURES

- Water closet shall be vitreous china, free standing toilet combination, close coupled push button dual flush, siphon jet flushing system, soft close seat cover and complete with fittings and mounting accessories.
- Lavatory shall be vitreous china, counter type with rear overflow, and complete with lever type faucets, supply pipe, stainless p-trap and mounting accessories.
- Toilet paper holder shall be vitreous china wall mounted. Color shall reconcile with the adjacent fixture and facing tiles. Refer location to the supervising architect.
- Soap holder shall be vitreous china, wall mounted. Color shall reconcile with the adjacent tile works. Refer location to the supervising architect.
- Faucets shall be lever type made of stainless steel for interior use.

- Floor drains shall be made of stainless steel, measuring 10cmx10cm and provided with detachable stainless strainer.
- The Contractor shall show samples of the required fixtures for the approval of the end-user before purchasing of the same.
- Storm drainage piping layout shall be installed considering aesthetic of the building. All roof deck and roof garden drains shall be dome type roof drain as shown in the approved plans.

3.00 EXECUTION

3.01 PLUMBING FIXTURES

Include all plumbing fixtures shown on the drawings and specified herein by the Architect in all bids to be considered.

- A. Install all plumbing fixtures free and open in a manner to afford access for cleaning. Furnish with brackets, cleats, plates and anchors required to support the fixtures rigidly in place.
- B. After the installation of any, or all, of the plumbing fixtures, keep them clean and in working order but disallow all use until the building has been turned over and accepted by the Owner.
- C. Make fixtures, trims, faucets, escutcheons, and waste pipes that are exposed to view in finished spaces of brass material with polished chromium plating or nickle finish, unless otherwise specified.
- D. Be responsible for providing those portions of the fixtures, fittings (as trims) which are not provided with the fixture but are required for the complete installation. Check all the fixtures to determine the portions which must be provided to complete the installation.
- E. Provide each fixture and subsequently a set of fixtures in one space, with separate stop or gate valves so that each fixture or a row of fixtures, may be separately controlled without affecting any other fixtures in another space.

3.02 TRAPS

- A. Except for the presence of grease interceptor and other devices where the trap is an integral part of the design, equipped with a trap every fixture and other equipment requiring connections to the drainage system.

- B. Used traps of recessed drainage pattern for threaded pipe.
- C. Set each trap as close as possible to the fixture served and render level with respect to their water seal.

3.03 PIPE INSTALLATIONS

- A. Furnish and install all necessary pipe sleeves, hangers and supports at proper and appropriate locations. **Never install pipes through columns, footings, beams, ribs, or other structural members unless clearly noted in the drawings, or with written approval of the Civil Engineer (designer).**
- B. Offsets: Offsets shall be of 45 degree wyes, except as otherwise directed or noted by the Engineer. Changes in direction shall be by approved long sweep elbows or other acceptable fittings.
- C. Pipe Sleeves: Make all pipe sleeves secure in place. Size sleeves to provide approximately 6 millimeters clearance around the incoming pipe. Use PVC or steel pipes for pipe sleeves in general. Use galvanized iron pipes and sheets as the case may require for sleeves in floors. When appropriate and called for, provide the sleeves with an integral flashing flange or a clamping device to which a flashing shield can be clamped or soldered.
- D. Anchors and Guides: Support rigidly all piping along surfaces by means of approved supports. Support piping to maintain required position and pitching of lines to prevent vibration, and to secure piping in place. Arrange so as to provide for expansion and contraction.
- E. Tapping for Fixtures: Make connections between fixtures and flanges on soil pipes absolutely gas and water tight, and sealed.

For pipe terminals intended to be tapped to fixtures, practice care and precision in determining outlet or inlet locations during the pipe installation stage and considering the specific finished space housing such as fixtures.

For an array of fixtures in one space, and where distances between fixtures and walls are critical, use guide templates in locating the exact setting of fixtures that tapping joint location supply and drain pipes are pinpointed.

- F. Cleaning: Rid all exposed metal surfaces of grease, dirt, or foreign material. Polish all chromed components. For any damage, stoppage, or discoloration of part of the building and its furnishings and equipment, resulting from failure to clean the piping

system, repair or replace all such affected areas and components at no cost to the Owner.

DIVISION 11 – ELECTRICAL WORKS

SECTION 110: GENERAL ELECTRICAL WORKS

1.00 GENERAL

1.01 General Conditions

The work under this Section shall be subject to the requirements of the General Conditions, which shall be included as part of these Project Information Document and which shall apply to all work to be performed under the Electrical Works. The contract documents, instructions, drawings and specifications shall be considered as one. Whatever is called for by any of the documents shall be as binding as if called for by all.

1.02 General Description

The Electrical Works include furnishing of materials, equipment, devices and related incidental items, perform labor and installation to complete a proper electrical system for the proposed CONSTRUCTION OF GYMNASIUM PHASE III, located at MMSU, City of Batac, Ilocos Norte, except those portions of the work which are expressly stated to be done by others.

All work shall be in accordance with the latest Philippine Electrical Code, Ordinances of the local enforcing and governing authority, the drawings and as specified herein except where some shall conflict with codes, in which the latter shall then govern. The requirements in regard to materials and workmanship specify the required standard for the furnishing of all labor, materials and appliances necessary for the complete installation of the work specified herein and indicated on the drawings. These specifications are intended to provide a broad outline of the required equipment, but are not intended to include all details of the design and construction.

1.03 WORK INCLUDED

Under these specifications, provide all labor, materials and equipment and perform all the work necessary for the complete execution of the electrical systems shown on the electrical drawings with reference to the general construction drawings as herein specified.

The contractor shall undertake all contingent; incidental and required works to complete the Electrical Works as it is intended by the Designer. The contractor's bid amount shall be deemed to be complete in all aspects of the work.

1.04 SCOPE OF WORKS

The Electrical Works shall include but not limited to the following principal items of work:

- A. Supply and installation of complete electrical works for the entire project including roughing ins for the electrical lines.
- B. Supply and installation of complete electrical works for the entire project as called for in the plans, specifications and bid documents.
- C. Supply and installation of all conduits and fittings, cable trays, hangers and supports and wiring devices.
- D. All lighting fixtures and lamps, luminaries, power receptacles, switches and other wiring devices roughing ins, except those marked or those specified to be done by others.
- E. All electrical conduit roughing-ins installation shall be included through grid 1-3, grid 3-12 and grid 12-15 (Ground Floor Plan, Lower Level Bleacher Plan, Bleacher Plan, Roof Deck Plan) except the Grid 3-12 of Ground Floor Plan (Power Layout) and Lower Level Bleacher Plan (Lighting Layout and Power Layout).
- F. All cable tray installations shall be referred to the approved plan.
- G. Painting of all exposed electrical conduits and equipment using the same shade of the location where it will be installed.
- H. Securing and payment of electrical permits and certificate of electrical inspections as well as the needed as-built plans to be submitted.
- I. Supply and installation of all other items not stated herein but necessary to complete the Electrical Works.
- J. The Contractor shall coordinate with INEC (Ilocos Norte Electric Cooperative) for the primary line extension.

1.05 CODES, INSPECTIONS, PERMITS AND FEES

- A. The work under this Contract is to install according to the requirements of the latest Philippine Electrical Code, the rules and regulations of the City of Batac. Nothing contained in these specifications or shown on the drawings shall be construed as to conflict with the national and local ordinances or laws governing the installation of the electrical work and all such laws and ordinances are hereby made part of these specifications. The Contractor is required to meet the requirements thereof.
- B. All permits and electrical fees required for this work shall be obtained by and at the expense of the Contractor. The Contractor shall furnish the Procuring Entity and PPDO the final certificate of inspection and approval from the proper government

authorities after the completion of the work. The contractor shall prepare all “As-Built” plans and all other paperwork required by the approving authorities.

1.06 DRAWINGS

The Contractor shall, during the progress of the work, keep a careful record of all changes where the actual installation differs from that shown on the construction drawings. The engineers will furnish at cost a complete set of print outs on which the contractor shall, in a neat and accurate manner, make a complete record of all changes and revisions to the original design, as installed in the completed work. These drawings shall be submitted to PPDO for approval. After the approval, they shall become the property of PPDO and final payment will be withheld until receipt of the approved record drawings.

1.07 SHOP DRAWINGS AND SAMPLES

- A. Prepare and submit for approval to PPDO shop drawings and cuts of all equipment, appliances and fixtures to be furnished. After final approval by PPDO, a sufficient number of copies as directed shall be furnished for distribution. The materials to be used for the electrical installations, device cuts and/or catalogues shall be clearly marked to indicate the items furnished. Do not submit individual sheets, cuts, catalogues or drawings, for instance, lighting fixture cuts should be for all types of fixtures to be furnished, rather than a few types.
- B. Submit to PPDO for approval samples of conduits, wires, cable trays, and any materials to be used for electrical installations, and or any other items as may be required by the consultant.

1.08 COORDINATION

The contractor shall cooperate in every way and work with all other contractors to whose apparatus he shall connect is part of his work and also provide in his work connections and facilities for the connection of their work. The contractor is hereby called upon to prepare such drawings of details of his equipment, locations of cable trays, sleeves, inserts and supports as may be required for the assistance of the general contractor and the contractors for other mechanical trades. Upon demand, he shall furnish these drawings in adequate numbers for the information of all parties concerned and shall coordinate the preparation of these drawings by consultation with other trades involved before submitting them. The approval of such drawings will not relieve the Contractor in any way from the responsibility of not properly locating or coordinating his work with the work of others.

1.09 MINOR MODIFICATIONS

The plans as drawn are based upon the architectural plans and the details and shown condition as accurately as it is possible to indicate them in scale. The plans are diagrammatical and do not necessarily shows all fittings necessary to fit to the building conditions. The locations of cable trays, outlets, apparatus and appliances shown on the plans are approximate. The contractor shall be responsible for the proper location in order to make them fit with the architectural details and instructions from PPDO's representative on site.

1.10 GUARANTEES

- A. The Contractor shall guarantee that the entire electrical systems are free from all defective workmanship and materials, and will remain so for a period of One (1) year from date of acceptance of the work.
- B. The Contractor shall indemnify and save harmless the Procuring Entity and PPDO from and against all liability for damages arising from injuries or disabilities to persons or damages to property occasioned by any or omission of the contractor or any of his subcontractors including any and all legal expenses or otherwise, which may be incurred by the Procuring Entity and PPDO in the defense of any claims, actions, or suit.

1.11 APPROVAL, SUBSTITUTIONS, ETC.

Wherever hereinafter the work "for approval", or "approved" (make, type, size, arrangement, etc.) are used, especially in regard to manufactured specialties, or wherever it is desired to substitute a different make or type of apparatus, shall be submitted to PPDO and written approval must be secured before the apparatus is ordered or installed.

1.12 SUB-CONTRACTOR

The contractor shall be held fully responsible for the work of any subcontractors or manufacturer performing work or supplying materials, as it is intended that the entire electrical work, when finally delivered to the Procuring Entity, shall be ready in every respect for satisfactory and efficient operation.

1.13 WORKMANSHIP

- A. The work throughout shall be executed in the best and through manner under the direction of and to the satisfaction of the Procuring Entity and PPDO, who will jointly interpret the meaning of the drawings, PID and specifications and shall have the

power to reject any work and materials which, in their judgment are not in full accordance therewith.

- B. The contractor shall have in his file, for ready access and reference, a set of drawings indicating all work as normally installed, incorporating in same all changes and additions. Upon the termination of the Contract, he shall prepare a set of tracings indicating thereon the electrical work as actually and finally installed. These tracings shall be turned over to PPDO.

2.00 MATERIALS AND INSTALLATION

2.01 STANDARD OF MATERIALS

- A. All materials shall be new and shall conform with the standards of Underwriter's Laboratories, Inc., ASA, IEEE, NEMA, IPCEA and ASTM in every case where such a standard has been established for the particular type of materials in question.
- B. All materials on all systems shall comply with the following specifications, unless noted specifically and all materials when not specified shall be the best of their respective kind.
- C. Samples of any materials shall be submitted for approval to the designing electrical engineer.

2.02 INSTALLATION REQUIREMENTS

- A. Approval of Materials: All electrical materials shall be new and must meet the requirements of the specifications and shall bear the inspection label wherever such standards have been established. As soon as practicable and within thirty days after the official award of Contract and before any materials or equipment is ordered, the Contractor shall submit to PPDO for approval, one complete list of materials, apparatus and equipment, in triplicate, giving the manufacturer's name, address, descriptive data, trade name of items, rated capacities, certified analysis catalog number, etc., when called upon to do so, the complete specifications and cut of drawings of such item, of whole or portion of list, as required by the Engineers, which he proposes to use of install.
- B. Cutting and Fittings: Contractor shall do all cutting and fittings required for the installation of the work to make and join the several parts and coordinate with the work of other trades, in accordance with the drawings and in a manner satisfactory to the Engineers.
- C. Protection: Contractor shall effectually protect his own work from damage during

and as may be necessary after installation and he shall likewise protect adjoining work of other trades from damage resulting from the installation of electrical work.

2.03 CONTRACT DRAWINGS

The location of various items indicated on the drawings are presumed to be approximately correct, but it is to be understood however, that the small-scale drawings are necessarily diagrammatic and that such locations as shown, are subject to slight revision as the work is installed, which may be necessary to accommodate local construction conditions. No major change shall be made, however, without the approval in writing of PPDO. The Contractor shall examine and study the architectural scale drawings, large scale and full-sized details, the approved shop drawings of other trades and he shall frequently consult with the general contractor to ascertain any changes that may have been made and he shall be guided accordingly before establishing the precise locations of cable trays, conduit runs, panels, pull and junction boxes and outlets for all lighting and power.

2.04 CONDUITS

- A. Conduits for interior and exterior systems shall be standard weight, uPVC, and thick walled.
- B. No conduits shall be used in any system smaller than 20 millimeters in diameter. Electric trade size, nor shall have more than four 90-degree bends in any one run and when necessary, pull boxes shall be provided as directed. Location and sizes of pull boxes shall be cleared to the engineer prior to fabrication and installation.
- C. The ends of all conduits shall be tightly plugged to exclude plaster, dust and moisture while the building is in the process of construction.
- D. All pipes and fittings on exposed work shall be secured by means of channels and clamps. Conduit lay outing, in all cases shall run perfectly straight and true.
- E. Conduits shall be properly supported and use appropriate electrical conduit elbows when bending/routing the conduits.
- F. Wireways installed in wet locations shall be of rain-tight construction. Wireways shall be supported at intervals not to exceed 1,500 mm, or for individual lengths longer than 150 mm at each end or joint, unless listed for other supports intervals. In no case shall the distance between supports exceeds 3000 mm. Dead ends of wireways shall be closed. Wireways shall be marked so that their manufacturer's name or trademark will be visible after installation.

2.05 OUTLETS, BOXES AND FITTINGS

- A. All outlets of whatever kind, for all systems, shall be provided with suitable fittings, which shall be either a box or other devices especially, designed to receive the type of fittings to be mounted thereon.
- B. The contractor shall consult with the Electrical Engineer to the nature of the various fittings to be used before installing the outlet fittings and shall conform strictly in the use of such fittings, to the nature of the appliance to be mounted on them, so that the work, when finished will be a completed design.
- C. At all outlets on concealed conduit work, provide plastic deep-type pressed-utility boxes of standard make. These boxes shall be especially designed for apparatus required and, in all cases, where such boxes are not available on the market, special boxes shall be made by the contractor at his own expense. Outlet boxes shall be deep type gauge # 16.

2.06 JUNCTION AND PULL BOXES

Junction and pull boxes as indicated or as required for facilitating the pulling of wires and cables. Pull boxes in finished places shall be located and installed with the permission of and to the satisfaction of PPDO. Junction and pull boxes securely mounted on the studs.

2.07 CABLE TRAYS, HANGING AND SUPPORTS

- A. Cable tray installation. Where cable tray support systems are fixed to primary supports (e.g. structural steel work or elements of the building) it is important to ensure that the primary supports are strong enough to carry the imposed loads. Cable trays shall be gauge # 16 and powder coated.
- B. The fixings used to connect the cable tray support systems to the primary supports also need to be checked to ensure that they are strong enough.
- C. Cable tray shall be securely anchored to supports. They shall be secured such that the tray or ladder system will not move during cable installation.
- D. Use hangers for cable tray installations, supported by threaded rods hung from ceiling brackets, channel support systems or from beam clamps attached to joists or beams.
- E. The location of hangers and supports should be carefully marked as per the approved specifications and drawings.
- F. Cable tray joints are to be positioned as close to the supports as possible, not more than 300 mm from either side and the maximum tray overhang past the last support should not exceed 600 mm.

- G. Required sizes of holes should be marked and drilled by using a drilling machine.
- H. The threaded rod should be fixed carefully into the anchor using clamping tools for a balance smooth twist. The threaded rod should be necessary thickness and length. Sizes should be as approved in the drawing. It should be done in such a way as to avoid damage to the threaded rod.
- I. Horizontal cable trays shall be supported by either wall mounted support bracket or a hanger rod system. The intervals between supports shall be as recommended by the manufacturer but this shall not exceed 1 meter for wall mounted support brackets, and 2 meters for the hanger rod system.
- J. The hanger, hanging support and cable tray bracket should be trimmed to required size and galvanizing paint should be applied on the edges.
- K. Supports for horizontal fittings should be located at a distance, no greater than 610 mm (24") from each end of the fitting on the attached cable tray.

2.08 LOCATION OF WIRING AND OUTLETS

- A. The contractor shall coordinate his work with all trades involved so that exact locations may be obtained for all outlets, apparatus, appliances and equipment. The circuit numbers indicated as numbers 1, 2, and 3, may not correspond to actual panel circuit connection numbers but must be balanced for better load distribution.
- B. The location of outlets shown on diagrammatic wiring plans shall be considered as approximate and it shall be incumbent upon the Contractor, before installation.

2.09 POWER AND LIGHTING SYSTEM

- A. All wiring shall be installed in electrical conduit or as indicated in the plan and in general shall be concealed in the structure.
- B. Mounting heights of devices shall be as detailed on the plans or as follows:
 - a. Local switches - 1400 mm from center of device to finished floor line.
 - b. Receptacles - 400 mm above floor or 150 mm above counters, or as shown in architectural details.

SECTION 111: ELECTRICAL MATERIALS AND ACCESSORIES

1.00 GENERAL

1.01 MATERIALS AND EQUIPMENT

- A. All materials and equipment shall be new and shall conform to the latest standards of the Philippine Electrical Code.
- B. Materials and equipment shall be standard of manufacturers regularly engaged in the production of such equipment and materials.
- C. For other required miscellaneous materials not specifically mentioned, provide the best of their respective kind.
- D. Defective equipment or materials damaged in the course of installation shall be replaced with a new one at no extra cost to the Owner.

1.02 COORDINATION WITH OTHER TRADES

The Contractor shall be responsible for proper coordination of his work with the other trades to avoid conflicts.

1.03 WORKMANSHIP

The electrical installation shall conform to these specifications, to all applicable standards, with the latest edition of the Philippine Electrical Code and the existing ordinances, rules and regulations of the local enforcing authorities. Workmanship shall be of the highest degree.

1.04 SUBMITTALS

- A. Samples: Submit samples or product brochures of the fixtures and equipment for approval as required by the Architect.
- B. Shop Drawings: submit shop drawings clearly indicating the following:
 - a. Arrangements and sectional views.
 - b. Necessary details, including complete information for making connection with other work.
- C. Operation Instruction: The Contractor shall provide instructions on safe operating procedures. The Contractor shall also coordinate with the Owner, regarding instructions, materials, training aids, drawings and other facilities, required to be provided in the proper operation and maintenance of all equipment furnished and installed by the Contractor.

2.00 PRODUCTS

2.01 BOXES, OUTLETS, AND DEVICES

- A. All utility boxes, junction boxes shall be PVC/Plastic. Submit sample for approval.

2.02 IDENTIFICATION OF MATERIALS

- A. Items referring in electrical shall have a cast stamp or indelible mark on it stating the manufacturer's trade mark or name, weight, type and the class of product.
- B. Rework and replace at no cost to the Owner all unidentified materials which may have been installed when so ordered by PPDO.

3.00 EXECUTION

3.01 INSTALLATION

- A. Installation shall be done by a duly licensed electrical practitioner and NCII holder for the helper. No execution of electrical works without the presence of REE/RME on site. The electrical contractor must have at least 5 years of experience in the building wirings and installation and have experience in the installation of panel boards and wire gutters. qualified and trained installer, well versed in the said works and as approved by PPDO.
- B. Before starting any works, the contractor must provide its own temporary power supply either from local utility provider (INEC) or any source of power supply aside from the university, for all the power consumptions needed within the construction of the building.
- C. Sample of each conduits, cable tray, supports and hangers, wiring devices and other electrical materials and equipment shall be submitted for approval by PPDO prior to their installation. No installation shall be made without the approval of materials PDDO.
- D. Utility boxes, junction boxes and conduits will be installed shall be free from sharp edge and burrs. Conduits shall be laid in a neat and organized manner. Conduit runs shall be planned so as not to conflict with any other services pipe, lines and mechanical duct.
- E. Coordinate with the other trade and specialty Contractors whose works are involved or affected in the installation of the fixtures as to schedule and other necessary tasks.
- F. Be responsible for providing those portions of the equipment such as trims which are not provided with the equipment but are required for the complete installation. Check all the equipment to determine the portions which must be provided to complete the installation.
- G. Furnish with brackets, cleats, plates and anchors required to support the equipment rigidly in place.
- H. After the installation of any, or all, of the fixtures, keep them clean and in working order but disallow all use until the building has been turned over and accepted by the Procuring Entity.

3.02 ROUGHING-INS

- A. All electrical conduit roughing-ins shall be routed/refer into the approved plan.
- B. The right is reserved by the PPDO to change the exact location of any switches, lighting fixtures, receptacle outlet, and any other outlets in any location before installation.
- C. Boxes shall be of approved design and construction, and of such form and dimension as required to serve the kind of fixtures to be used and the number, size and arrangement of conduits connected thereto. Deep boxes, box rings, and raised plaster covers shall be used when necessary to obtain the required conductor capacity. Floor outlets shall have standard round adjustable boxes.
- D. Each outlet in the wiring or raceways system shall be provided with the box to suit the conditions encountered. Boxes for exposed or in wet location shall be of the cast-metal type having threaded hubs. Boxes for concealed work shall be cadmium plated or zinc-coated sheet metal type.
- E. Boxes installed in concealed locations shall be set flush with the proper extension rings or plaster covers where required. Boxes shall be installed in a rigid and satisfactory manner.
- F. Boxes shall not be less than 38 millimeters deep unless shallower boxes are required in the particular outlets and fixtures to be installed.

3.03 FINAL INSPECTION

After completion of electrical installation and at such time as Architect of his representatives may direct the Contractor in the presence of the Engineer or his authorized representative shall conduct final inspection to fully and completely demonstrate that the work has been installed in accordance with all applicable specifications, codes and drawings.

3.04 GUARANTEE

- A. The Contractor shall furnish written guarantee that all works shall be free from defects in materials, equipment and workmanship for a period agreed by both parties.
- B. Any work that becomes defective shall be made good by the Contractor at his own expense in a manner satisfactory to the Procuring Entity.

DIVISION 12 – ELECTRONIC WORKS

SECTION 120: GENERAL ELECTRONIC WORKS

1.00 GENERAL

1.01 General Conditions

The work under this Section shall be subject to the requirements of the General Conditions, which shall be included as part of these Project Information Document and which shall apply to all work to be performed under the Electronics Works. The contract documents, instructions, drawings and specifications shall be considered as one. Whatever is called for by any of the documents shall be as binding as if called for by all.

1.02 General Description

The Electronics Works include furnishing of materials, equipment, devices and related incidental items, perform labor and installation to complete a proper electronics system for the Infrastructure Development / Construction of Health and Wellness Center, Fish and Marine Products Processing Building and located at MMSU, Batac City except those portions of the work which are expressly stated to be done by others.

All work shall be in accordance with the Philippine Electronics Code, R.A. 9292 and other existing laws, local ordinances of the local enforcing and governing authority, policies of the electric and Telephone Company, the drawings and as specified herein except where some shall conflict with codes, in which the latter shall then govern. The requirements in regard to materials and workmanship specify the required standard for the furnishing of all labor, materials and appliances necessary for the complete installation of the work specified herein and indicated on the drawings. These project information document are intended to provide a broad outline of the required equipment, but are not intended to include all details of the design and construction.

All Electronic Works shall be under the direct supervision of a duly Licensed Professional Electronics Engineer and /or Electronics Engineer.

1.03 WORK INCLUDED

Under these specifications, provide all labor, materials and equipment and perform all the work necessary for the complete of the roughing-ins execution of the electronics systems shown on the electronics drawings with reference to the general construction drawings as herein specified.

The contractor shall undertake all contingent; incidental and required works to complete the Electronic Works as it is intended by the Designer. The contractor's bid amount shall be deemed to be complete in all aspects of the work.

SECTION 121: SCOPE OF WORKS

1.01 The Electronics Works shall include but not limited to the following principal items of work:

- A. Supply and installation of complete electronics and auxiliary works for the entire project including the following:
 - a. Structured cabling for all building electronics system (roughing-ins)
 - b. Redundant connections for backup purposes
 - c. Supervision and Commissioning
- B. Supply and installation of complete electronics works for the entire project as called for in the plans, specifications and bid documents.
- C. Supply and installation of the following support infrastructure:
 - 1. All horizontal pathways including
 - a. Conduit
 - b. Junction boxes
 - c. Drywall rings
 - d. Raceway
 - e. Cable tray
 - f. Pull boxes
 - g. Sleeves
 - 2. Communications Rooms including
 - a. Power
 - b. Lighting
 - c. Ventilation and Air Conditioning
 - d. Flooring
 - e. Access
 - 3. Vertical Infrastructure

- a. Vertical risers
 - b. Vertical pathways
4. Building Entrance
- a. Conduit sleeves
 - b. Pathway to MDF
- D. The Voice/Telephone system and IT System: the work includes the provisions of all conduits, outlet boxes, and terminal cabinets and cables and fittings complete as required or as shown in the drawings.
- E. The general administration paging and intercom system furnish and install roughing-in works, equipment and cables as shown on the plans.
- F. Painting of all exposed cable conduits, enclosures and equipment.
- G. Termination of all electronic system.
- H. Securing and payment of electronics permits and certificate of inspections.
- I. Concrete chipping and restoration works.

1.02 CODES, INSPECTIONS, PERMITS AND FEES

- A. The work under this Contract is to install according to the requirements of RA 9292, the latest Philippine Electronics Code, the rules and regulations of the City of Batac and the requirements of the local telecommunications companies. Nothing contained in these specifications or shown on the drawings shall be construed as to conflict with the national and local ordinances or laws governing the installation of the electronics work and all such laws and ordinances are hereby made part of these specifications. The Contractor is required to meet the requirements thereof.
- B. All permits and fees required for this work shall be obtained by and at the expense of the Contractor. The Contractor shall furnish the Procuring Entity and PPDO the final certificate of inspection and approval from the proper government authorities after the completion of the work. The contractor shall prepare all "As-Built" plans and all other paperwork required by the approving authorities.

1.03 DRAWINGS

The Contractor shall, during the progress of the work, keep a careful record of all changes where the actual installation differs from that shown on the construction drawings. The engineers will furnish at cost a complete set of print outs on which the contractor shall, in a neat and accurate manner, make a complete record of all changes and revisions to the original design, as installed in the completed work. These drawings shall be submitted to PPDO for approval. After the approval, they shall become the property of PPDO and final payment will be withheld until receipt of the approved record drawings.

1.04 SHOP DRAWINGS AND SAMPLES

- A. Prepare and submit for approval to PPDO shop drawings and cuts of all equipment, appliances and fixtures to be furnished. After final approval by PPDO, a sufficient number of copies as directed shall be furnished for distribution. Fixture and device cuts and/or catalogues shall be clearly marked to indicate the items furnished. Do not submit individual sheets, cuts, catalogues or drawings, for instance, lighting fixture cuts should be for all types of fixtures to be furnished, rather than a few types.
- B. Submit to PPDO for approval samples of conduits, wires, wiring devices, finished plates and or any other items as may be required by the consultant.

1.05 COORDINATION

The contractor shall cooperate in every way and work with all other contractors to whose apparatus he shall connect is part of his work and also provide in his work connections and facilities for the connection of their work. The contractor is hereby called upon to prepare such drawings of details of his equipment, locations of sleeves, inserts and supports as may be required for the assistance of the general contractor and the contractors for other mechanical trades. Upon demand, he shall furnish these drawings in adequate numbers for the information of all parties concerned and shall coordinate the preparation of these drawings by consultation with other trades involved before submitting them. The approval of such drawings will not relieve the Contractor in anyway from the responsibility of not properly locating or coordinating his work with the work of others.

1.06 APPROVAL, SUBSTITUTIONS, ETC.

Wherever hereinafter the work “for approval”, or “approved” (make, type, size, arrangement, etc.) are used, especially in regard to manufactured specialties, or wherever it is desired to substitute a different make or type of apparatus, shall be submitted to PPDO and written approval must be secured before the apparatus is ordered or installed.

1.07 SUB-CONTRACTOR

The contractor shall be held fully responsible for the work of any subcontractors or manufacturer performing work or supplying materials, as it is intended that the entire electrical work, when finally delivered to the Procuring Entity, shall be ready in every respect for satisfactory and efficient operation.

1.8 WORKMANSHIP

- A. The work throughout shall be executed in the best and through manner under the direction of and to the satisfaction of the Procuring Entity and PPDO, who will jointly interpret the meaning of the drawings, PID and specifications and shall have the power to reject any work and materials which, in their judgment are not in full accordance therewith.
- B. The contractor shall have in his file, for ready access and reference, a set of drawings indicating all work as normally installed, incorporating in same all changes and additions. Upon the termination of the Contract, he shall prepare a set of tracings indicating thereon the electrical work as actually and finally installed. These tracings shall be turned over to PPDO.

2.00 MATERIALS AND INSTALLATION

2.01 STANDARD OF MATERIALS

- A. All materials shall be new and shall conform to the standards of Underwriter’s Laboratories, Inc., ISO, TIA, IEC, IEEE, ITU-T, ITU-R, ANSI latest edition, ASTM and NFPA 101 “Life Safety Code” in every case where such a standard has been established for the particular type of materials in question.

- B. All materials on all systems shall comply with the following specifications, unless noted specifically and all materials when not specified shall be the best of their respective kind.
- C. Samples of any materials shall be submitted for approval to the designing electrical engineer.

2.02 INSTALLATION REQUIREMENTS

- A. Approval of Materials: All electronics materials shall be new and must meet the requirements of the specifications and shall bear the inspection label wherever such standards have been established. As soon as practicable and within thirty days after the official award of Contract and before any materials or equipment is ordered, the Contractor shall submit to PPDO for approval, one complete list of materials, apparatus and equipment, in triplicate, giving the manufacturer's name, address, descriptive data, trade name of items, rated capacities, certified analysis catalog number, etc., when called upon to do so, the complete specifications and cut of drawings of such item, of whole or portion of list, as required by the Engineers, which he proposes to use of install.

3.00 FIRE DETECTION AND ALARM SYSTEM

3.01 GENERAL

The contractor shall furnish and install a complete, operational Fire Detection and Alarm System as shown on the drawings and as covered by these specifications.

The entire system shall be standard products of one manufacturer except where indicated and to ensure that it meets stringent Life Safety standards, shall be listed by the Underwriter's Laboratories, Inc. (UL) and Factory Mutual, Inc. (FM).

The entire system shall be installed only by a duly authorized representative of the manufacturer who shall be able to refer to existing similar installations 10 years or older in proper operation.

Branch conduit shall consist of either metallic EMT or IMC pipes with a minimum diameter of 20 mm. or as indicated in the plans. Riser conduits shall be metallic unless otherwise indicated.

Any deviations or substitutions from these specifications shall require submittals to the consulting engineer for approval of original manufacturer's brochures, technical manuals shall clearly indicate by highlighting all particular entries showing conclusively point-by-point that the specifications has been attained. This shall be determined upon actual testing and observation of system operational features.

3.02 MANUAL STATIONS

Manual stations shall be non-coded, dual action, break glass rod type. It shall be constructed of red finished, fire retardant Lexan with raised white letters indicating Fire and Operating instructions.

3.03 GUARANTEE

The contractor shall guarantee all equipment installed to be free from defects in both material and workmanship for a period of one (1) year. Any equipment found to be defective should be repaired or replaced by the contractor at no additional cost to the owner.

As part of the guarantee, the contractor shall provide an owner's manual, which shall include brochures, installation manuals, and troubleshooting manuals and a point-to-point diagram of the system installed.

DIVISION 13 – MECHANICAL WORKS (Roughing-ins only)

SECTION 130: GENERAL REQUIREMENTS

1. MECHANICAL ROUGHING - IN WORKS

This work is regarding the installation of penetration pipe sleeves for Split Type Air Conditioning Unit, Fire Sprinkler Line and Ventilation.

A. Quality

- The penetration sleeves shall be GI pipe – schedule 10, embedded and flushed on both sides of the wall.

B. Installation.

- **Pipe sleeves** are required for all piping that penetrates the wall. The penetrating wall are to be sealed with fire retardant material after installation of refrigerant piping.
- **Pipe sleeves** shall be fixed so that it will not be easily remove from the wall. Pipe sleeves shall be welded with dowel (see drawings).
- **Pipe sleeves** location shall be installed as per penetration diagram.

2. AIR CONDITIONING AND VENTILATION WORKS

A. Materials

All delivered materials shall be inspected, Contractor shall request for inspection and approval from the University prior to installation.

B. Quality and Features of Air-conditioning Unit Material

- The Air-conditioning Unit or ACU shall be Split Type System.
- The cooling capacity shall be based from this Specification Sheet.
- The ACU shall be fast cooling type with energy saving features.
- The ACU shall be equipped with Auto Cleaning and Allergy Filter.
- The ACU shall be low noise level.
- The ACU shall be constructed with a durable material with a 5 years warranty.

C. Exhaust Ventilation

- Ducting material shall be PVC or Aluminium Ducting, size shall be determined by the contractor.
- Air flow capacity shall be based from the mechanical plan and this specification.
- Exhaust Grille shall be low profile, fixed circular or rectangular shape with mounting collar and nailing strip.
- Stainless Steel vent cap shall be used.

D. INSTALLATION

Installation of Air conditioning and Ventilation System shall be in accordance with the issued Mechanical drawing and Manufacturer's Standard.

Air Conditioning Installation

- Mechanical Works shall be done by a duly licensed air-conditioning specialist, authorized dealers, suppliers and trained technicians.
- Installation of the ACU shall be in accordance with the mechanical plan and Manufacturers Standard provided by the Mariano Marcos State University, Physical Planning & Development Office or MMSU PPDO.
- The Fan Coil Unit (FCU) or Indoor Unit particularly wall type unit shall be installed where there is no obstruction of air flow of at least 300 mm at both sides.
- The Air-Cooled Condensing Unit (ACCU) or Outdoor Unit shall be at least 300 above the ground.
- The ACCU shall be properly ventilated and installed with a clearance of at least 500 mm from the wall.
- The refrigerant piping shall be copper material, properly insulated with 1" thick insulation and a white film vapor barrier.
- **Provide pipe sleeves** for all piping penetrating wall. The penetrating wall shall be sealed with fire retardant material after installation of refrigerant piping.
- **Condensate drain line** shall be 1" and 3/4" Polyvinyl Chloride (PVC) pipe and shall be directly routed toward outside the building for proper disposal of condensate and to avoid flooding inside the building.
- Pipe routing shall be in accordance with the Mechanical Plan, any modification due to site/building condition shall be coordinated with MMSU PPDO for approval.

Exhaust Pipe Installation

- Outdoor exhaust pipe shall be finished using stainless steel vent cap with wire mesh or screen.
- Ducting shall be properly supported using hangers or trapeze. Support shall be designed to carry the weight of the ducting to prevent vibration and from falling down.

E. COMMISSIONING AND TESTING

Start-up, Commissioning and Testing shall be witnessed and assisted by the Vendor representative or specialist including University technical personnel.

F. GUARANTEE

The Contractor shall furnish to the owner a written guarantee covering the satisfactory operations of the installation. This shall be for a period of one year after the date of acceptance. During this period, the contractor shall repair or replace any defective work and pay for any repair or replacement cost. All damaged due to improper use of caused by the Owner or his representatives / employees shall be at the Owner's expense.