

## **PHILIPPINE BIDDING DOCUMENTS**

(As Harmonized with Development Partners)

# **Procurement of INFRASTRUCTURE PROJECTS**

**FURNISHING OF LABOR AND  
MATERIALS FOR THE SUPPLY AND  
INSTALLATION OF CAROLINA IV  
PUMPING STATION PUMP, ELECTRO-  
MECHANICAL EQUIPMENT,  
DISCHARGE LINE, AND ELECTRICAL  
EQUIPMENT  
(INFRA 2023-006)**

Government of the Republic of the Philippines

**Sixth Edition  
July 2020**

# Preface

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

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

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

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

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

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

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

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# ***Glossary of Terms, Abbreviations, and Acronyms***

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

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

**BAC** – Bids and Awards Committee.

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

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

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

**BIR** – Bureau of Internal Revenue.

**BSP** – Bangko Sentral ng Pilipinas.

**CDA** – Cooperative Development Authority.

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

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

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

**CPI** – Consumer Price Index.

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

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

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

**GFI** – Government Financial Institution.

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

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

**GOP** – Government of the Philippines.

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

**LGUs** – Local Government Units.

**NFCC** – Net Financial Contracting Capacity.

**NGA** – National Government Agency.

**PCAB** – Philippine Contractors Accreditation Board.

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

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

**PSA** – Philippine Statistics Authority.

**SEC** – Securities and Exchange Commission.

**SLCC** – Single Largest Completed Contract.

**UN** – United Nations.

## ***Section I. Invitation to Bid***

### **Notes on the Invitation to Bid**

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

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

- a. The date of availability of the Bidding Documents, which shall be from the time the IB is first advertised/posted until the deadline for the submission and receipt of bids;
- b. The place where the Bidding Documents may be acquired or the website where it may be downloaded;
- c. The deadline for the submission and receipt of bids; and
- d. Any important bid evaluation criteria.

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



## **Invitation to Bid for FURNISHING OF LABOR AND MATERIALS FOR THE SUPPLY AND INSTALLATION OF CAROLINA IV PUMPING STATION PUMP, ELECTRO- MECHANICAL EQUIPMENT, DISCHARGE LINE, AND ELECTRICAL EQUIPMENT**

1. The **METROPOLITAN NAGA WATER DISTRICT (MNWD)**, through its approved Corporate Budget, intends to apply the sum of **FOUR MILLION ONE HUNDRED FIFTY-SEVEN THOUSAND FOUR HUNDRED TWENTY-SEVEN PESOS (₱ 4,157,427.00)** being the Approved Budget for the Contract (ABC) to payments under the contract for **FURNISHING OF LABOR AND MATERIALS FOR THE SUPPLY AND INSTALLATION OF CAROLINA IV PUMPING STATION PUMP, ELECTRO-MECHANICAL EQUIPMENT, DISCHARGE LINE, AND ELECTRICAL EQUIPMENT, PROJECT NO. INFRA 2023-006**. Bids received in excess of the ABC shall be automatically rejected at bid opening.
2. The **MNWD** now invites bids for the Procurement Project. Completion of the Works is required **NINETY (90) 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: Instructions to Bidders.
3. Bidding will be conducted through open competitive bidding procedures using non-discretionary “*pass/fail*” criterion as specified in the 2016 revised Implementing Rules and Regulations (IRR) of Republic Act (RA) No. 9184.
4. Interested bidders may obtain further information from **MNWD** and inspect the Bidding Documents at the address given below from 8:00 AM – 12:00 NN AND 1:00 PM – 5:00 PM.
5. A complete set of Bidding Documents may be acquired by interested bidders on **APRIL 20 TO MAY 9, 2023** from the address below and upon payment of the applicable fee for the Bidding Documents, pursuant to the latest Guidelines issued by the GPPB, in the amount of **FIVE THOUSAND PESOS (₱ 5,000.00)** only.
6. The **MNWD** will hold a Pre-Bid Conference on **APRIL 27, 2023, 1:30PM** at 2<sup>nd</sup> Floor, Conference Room, MNWD Building, 40 J. Miranda Avenue, Naga City and via Zoom or Google Meet Video Conference which shall be open to prospective bidders.

For those who are interested to join the video conference, you are hereby advised to submit your letter of intent one (1) day before the scheduled Pre-Bid Conference, indicating the e-mail address, wherein the Zoom Video Conference I.D. and password will be sent.

Furthermore, only one (1) authorized representative for each prospective bidder is allowed to participate. Kindly send your letter to:

**MR. JON LOUIE A. SANCHEZ**  
BAC Chairperson  
Tel No.: (054) 473-7813 local 111;  
Fax No.: (054) 473-9288  
E-mail address: [mnwdbac@yahoo.com](mailto:mnwdbac@yahoo.com)

7. Bids must be duly received by the BAC Secretariat at the office below on or before **MAY 9, 2023**. Late bids shall not be accepted.
8. All bids must be accompanied by a bid security in any of the acceptable forms and in the amount stated in **ITB** Clause 16.
9. Bid opening shall be on **MAY 9, 2023, 1:30 PM** at 2<sup>nd</sup> Floor, Conference Room, MNWD Building, 40 J. Miranda Avenue, Naga City. Bids will be opened in the presence of the bidders' representatives who choose to attend the activity.
10. The **MNWD** reserves the right to reject any and all bids, declare a failure of bidding, or not award the contract at any time prior to contract award in accordance with Sections 35.6 and 41 of the 2016 revised Implementing Rules and Regulations (IRR) of RA No. 9184, without thereby incurring any liability to the affected bidder or bidders.
11. For further information, please refer to:

**JON LOUIE A. SANCHEZ**  
Administrative Services Department  
MNWD Compound, 40 J. Miranda Avenue, Naga City  
Tel No.: (054) 473-7813 local 111;  
Fax No.: (054) 473-9288  
Email Address: [mnwdbac@yahoo.com](mailto:mnwdbac@yahoo.com)  
Website Address: [mnwd.gov.ph](http://mnwd.gov.ph)

12. You may visit the following website/s:

For downloading of Bidding Documents, please visit the Philippine Government Electronic Procurement System (PhilGEPS) website

*April 20, 2023*

**JON LOUIE A. SANCHEZ**  
Chairperson  
Bids and Awards Committee

## ***Section II. Instructions to Bidders***

### **Notes on the Instructions to Bidders**

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

## 1. **Scope of Bid**

The Procuring Entity, **METROPOLITAN NAGA WATER DISTRICT (MNWD)** invites Bids for the **FURNISHING OF LABOR AND MATERIALS FOR THE SUPPLY AND INSTALLATION OF CAROLINA IV PUMPING STATION PUMP, ELETCTRO-MECHANICAL EQUIPMENT, DISCHARGE LINE, AND ELECTRICAL EQUIPMENT**, with Project Identification Number **INFRA 2023-006**.

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 2023 in the amount of **FOUR MILLION ONE HUNDRED FIFTY-SEVEN THOUSAND FOUR HUNDRED TWENTY-SEVEN PESOS (₱ 4,157,427.00)**.

2.2. The source of funding is GOCC and GFIs, the proposed Corporate Operating Budget.

## 3. **Bidding Requirements**

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

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

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

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

The Procuring Entity, as well as the Bidders and Contractors, shall observe the highest standard of ethics during the procurement and execution of the contract. They or through an agent shall not engage in corrupt, fraudulent, collusive, coercive, and

obstructive practices defined under Annex “I” of the 2016 revised IRR of RA No. 9184 or other integrity violations in competing for the Project.

## **5. Eligible Bidders**

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

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

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

## **6. Origin of Associated Goods**

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

## **7. Subcontracts**

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

The Procuring Entity has prescribed that **Subcontracting is not allowed**.

## **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 at **2<sup>nd</sup> Floor, Conference Room, MNWD Building, 40 J. Miranda Avenue, Naga City**, and/or through **videoconference**, 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 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 until One Hundred Twenty (120) calendar days after the Bid Opening. 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 (1) original copy and three (3) additional hard copies of the first and second components of its Bid.

## **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***

### **Notes on the Bid Data Sheet (BDS)**

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

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

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

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

# Bid Data Sheet

ITB Clause																			
5.2	<p>For this purpose, contracts similar to the Project refer to contracts which have the same major categories of work, which shall be:</p> <ol style="list-style-type: none"> <li><b>INSTALLATION OF ELECTRO-MECHANICAL EQUIPMENT AND ELECTRICAL EQUIPMENT OF PUMPING STATION</b></li> <li>Completed within TWO (2) YEARS prior to the deadline for the submission and receipt of bids.</li> <li>Per MNWD BAC Resolution No. 18, Series of 2020, the bidder shall submit a <i>Constructors Performance Evaluation System (CPES) Rating Sheet, or any equivalent document in case of contracts with private sector, with at least satisfactory rating</i>, corresponding to the submitted SLCC. This is in addition to the Notice of Award and/ or Notice to Proceed and Certificate of Completion and Final Acceptance issued by the owner.</li> </ol>																		
7.1	Subcontracting is not allowed.																		
10.3	<p>Valid PCAB License:</p> <ol style="list-style-type: none"> <li>Size Range: Small B</li> <li>License Category C / D</li> </ol>																		
10.4	<p>The Bidder must submit the requirements which shows that all key personnel must meet the required minimum years of experience set below:</p> <ol style="list-style-type: none"> <li>Organizational chart for the contract to be bid</li> <li>List of contractor's personnel (viz, Project Manager, Project Engineers, Materials Engineers and Foremen), to be assigned to the contract to be bid, with their complete qualification and experience data;</li> <li>Contractor's Letter Certificate to Procuring Entity; and</li> <li>Bidders with a pending project with MNWD showing a slippage of more than 10% at the time of posting of Invitation to Bid shall not be allowed to bid. Bidders shall secure a certification from MNWD, including bidders without on-going projects.</li> </ol> <table style="width: 100%; margin-top: 20px;"> <thead> <tr> <th style="text-align: left;"><u>Key Personnel</u></th><th style="text-align: left;"><u>Relevant Experience</u></th></tr> </thead> <tbody> <tr> <td>1 – Project Engineer</td><td>3 years</td></tr> <tr> <td>1 – Electromechanical Technician</td><td>2 years</td></tr> <tr> <td>1 – Industrial Electrician</td><td>2 years</td></tr> </tbody> </table>	<u>Key Personnel</u>	<u>Relevant Experience</u>	1 – Project Engineer	3 years	1 – Electromechanical Technician	2 years	1 – Industrial Electrician	2 years										
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10.5	<p>The minimum major equipment requirements are the following:</p> <table style="width: 100%; margin-top: 10px;"> <thead> <tr> <th style="text-align: left;"><u>Equipment</u></th><th style="text-align: left;"><u>Number of Units</u></th></tr> </thead> <tbody> <tr> <td>1.) Delivery Vehicle</td><td>1</td></tr> <tr> <td>2.) Boom Truck / Lifting Machine</td><td>1</td></tr> <tr> <td>3.) Chain Block / Electric Chain Hoist</td><td>1</td></tr> <tr> <td>4.) Fabricated Clamp</td><td>1</td></tr> <tr> <td>5.) Mechanical Tools</td><td></td></tr> <tr> <td>    a.) Pipe Wrenches</td><td>1</td></tr> <tr> <td>    b.) Chain Tong</td><td>1</td></tr> <tr> <td>    c.) Open and Box End Wrench Set</td><td>1</td></tr> </tbody> </table>	<u>Equipment</u>	<u>Number of Units</u>	1.) Delivery Vehicle	1	2.) Boom Truck / Lifting Machine	1	3.) Chain Block / Electric Chain Hoist	1	4.) Fabricated Clamp	1	5.) Mechanical Tools		a.) Pipe Wrenches	1	b.) Chain Tong	1	c.) Open and Box End Wrench Set	1
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	d.) Hacksaw 1 e.) Hammer / Mallet 1 f.) Belt Wrench 1 6.) Welding Machine 1 7.) Electrical Tools a.) Multi-Tester 1 b.) Electrical Pliers 1 c.) Screw Drivers 1  The Bidder must submit List of Contractor's major equipment units, which are owned, leased, and / or under purchase, supported by proof of ownership, <b>Certificate of Availability of Equipment</b> from the equipment lessor / vendor / owner for the duration of the project; as the case may be, which must meet the minimum requirements for the contract set in BDS.
12	No further instruction.
15.1	The bid security shall be in the form of a Bid Securing Declaration or any of the following forms and amounts: a. The amount of not less than <b>EIGHTY-THREE THOUSAND ONE HUNDRED FORTY-EIGHT PESOS AND 54/100 (₱83,148.54)</b> only [2% of ABC], 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 <b>TWO HUNDRED SEVEN THOUSAND EIGHT HUNDRED SEVENTY-ONE PESOS AND 35/100 (₱207,871.35)</b> only [5% of ABC] if bid security is in Surety Bond.
19.2	Partial bid is not allowed. The Infrastructure project is packaged as a single lot and the lot shall not be divided into subs-lots for the purpose of bidding, evaluation and contract award.
20	<u><b>Only tax returns filed and taxes paid through the BIR Electronic Filing and Payments System (EFPS) shall be accepted.</b></u>  NOTE: The latest income and business tax returns are those within the last six months preceding the date of bid submission.
21	<b>Additional contract documents required by MNWD:</b>  Construction schedule and S-curve, manpower schedule, construction methods, equipment utilization schedule, and PERT/CPM.

## ***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

- 4.1. 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.
- 4.2. If possession of a portion is not given by the above date, the Procuring Entity will be deemed to have delayed the start of the relevant activities. The resulting adjustments in contract time to address such delay may be addressed through contract extension provided under Annex "E" of the 2016 revised IRR of RA No. 9184.

## 4. The Contractor's Obligations

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

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

## **5. Performance Security**

- 5.1. Within ten (10) calendar days from receipt of the Notice of Award from the Procuring Entity but in no case later than the signing of the contract by both parties, the successful Bidder shall furnish the performance security in any of the forms prescribed in Section 39 of the 2016 revised IRR.
- 5.2. The Contractor, by entering into the Contract with the Procuring Entity, acknowledges the right of the Procuring Entity to institute action pursuant to RA No. 3688 against any subcontractor be they an individual, firm, partnership, corporation, or association supplying the Contractor with labor, materials and/or equipment for the performance of this Contract.

## **6. Site Investigation Reports**

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

## **7. Warranty**

- 7.1. In case the Contractor fails to undertake the repair works under Section 62.2.2 of the 2016 revised IRR, the Procuring Entity shall forfeit its performance security, subject its property(ies) to attachment or garnishment proceedings, and perpetually disqualify it from participating in any public bidding. All payables of the GOP in his favor shall be offset to recover the costs.
- 7.2. The warranty against Structural Defects/Failures, except that occasioned-on force majeure, shall cover the period from the date of issuance of the Certificate of Final Acceptance by the Procuring Entity. Specific duration of the warranty is found in the **SCC**.

## **8. Liability of the Contractor**

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

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

## **9. Termination for Other Causes**

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

## **10. Dayworks**

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

## **11. Program of Work**

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

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

## **12. Instructions, Inspections and Audits**

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

## **13. Advance Payment**

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

## **14. Progress Payments**

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

## **15. Operating and Maintenance Manuals**

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

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



## ***Section V. Special Conditions of Contract***

### **Notes on the Special Conditions of Contract**

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

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

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

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

# Special Conditions of Contract

GCC Clause	
2	The <b>Intended Completion Date</b> is NINETY (90) CALENDAR DAYS after issuance of NOTICE TO PROCEED.
4.1	The Site is located at the City of Naga.
6	The site investigation reports are: <b>Affidavit of Site Inspection.</b>
7.2	Warranty against structural defects / failures: <b>One (1) Year</b> Warranty against factory defects under normal operating conditions for Pump and Motor: <b>Three (3) Years</b>
10	No dayworks are applicable to the contract.
11.1	Not applicable
11.2	Not applicable
13	The amount of the advance payment shall not exceed 15% of the Total Contract Price.
14	Materials and equipment delivered on the site but not completely put in place will not be included for payment.
15.1	The date by which “as built” drawings are required is upon completion of on-site works.
15.2	The amount to be withheld for failing to produce “as built” drawings and/or operating and maintenance manuals by the date required is 10% of the Total Contract Price.

# ***Section VI. Specifications***

## **OPERATING SPECIFICATIONS/REQUIREMENTS**

### **I. PUMP**

- 1) The pump must have minimum capacity of 60 LPS at a Total Dynamic Head design of 66.51 meters (218.22 ft.) and with minimum pump laboratory efficiency of 80% at design head.
- 2) There shall be no point within the operating range of the pump wherein the required horsepower exceeds the rated motor horsepower. In addition, the design point shall be located within the best efficiency range of the pump. Efficiency range shall be within the  $\pm 5\%$  of the pump's peak efficiency.
- 3) Constructed of stainless steel shaft, SS 431
- 4) Stainless steel inlet strainer prevents the entry of sand and other extraneous material
- 5) Built-in with stainless steel jam free check valve
- 6) High wear resistance stainless steel impeller and diffuser ensuring optimal performance
- 7) With stainless steel cable guard
- 8) The impellers shall be of the enclosed type, made of stainless steel, accurately fitted, smoothly finished and dynamically balanced at normal pump speeds.
- 9) They shall have removable stainless steel or rubber wear rings and lateral seal rings mounted in their companion cases.
- 10) The bowl cases shall be constructed of stainless steel.
- 11) Pump bearings shall be at least 2 ½ times the diameter of the shaft.
- 12) The pump must be secured with a pump guard.
- 13) All other pump materials shall be made of stainless steel.
- 14) All material requirements must be certified brand new and Contractor/Supplier should provide three (3) years warranty against factory defects under normal operating condition.
- 15) A Manufacturer's Standard Brochure with the pump performance curve must be provided to the MNWD.

### **II. MOTOR**

- 1) The motor shall be of squirrel cage, submersible induction type, encapsulated and rewindable type rated at 75Hp, 460VAC, 3-phase, 3525 rpm, 60 hertz AC.
- 2) The motor must be Double Flanged NEMA Mounting Design, complete with cable guard and motor pigtail.
- 3) The motor shall be designed for continuous duty operation and shall have a minimum service factor of 1.15.
- 4) Stainless steel splined shaft.
- 5) Shall be factory filled with non-toxic water-soluble fill solution.
- 6) With Six feature encapsulation system.
- 7) Field replaceable lead.
- 8) With external sand slinger on shaft.
- 9) Mechanical face seal at shaft exit.
- 10) Copper bar rotor.
- 11) Model shall be Variable Frequency Drive (VFD) approved.
- 12) Pump and motor must pass laboratory testing in the presence of a duly authorized representatives from MNWD before actual delivery.
- 13) All material requirements must be certified brand new and Contractor/Supplier should provide three (3) years warranty against factory defects under normal operating condition.
- 14) All labors, tools and equipment necessary for the complete, correct and efficient installation of these items shall entirely be provided for.

### **III. COLUMN (RISER) PIPE**

- 1) The column pipe shall be made of heavy type uPVC pipe with rubber seals at the ends of the threads.
- 2) The column pipe shall be provided with square threads designed to ensure proper gripping and to withstand heavy load and vibration.
- 3) The column pipes shall be connected with the couplers with a locking system and rubber rings between the joints.
- 4) The column pipe shall have the following minimum technical load and permissible hydrostatic pressure capacities.
  - Safe pulling load with chain pulley : 20,500 kgs.
  - Ultimate breaking load : 36,000 kgs.
  - Safe allowable hydrostatic pressure : 26 kgs/cm<sup>2</sup>
- 5) All the column pipes must be certified brand new and shall be covered by warranty clause.
- 6) All labors, tools and equipment necessary for the complete, correct and efficient installation of the column pipes shall entirely be provided for.

### **IV. FLOWMETER**

- 1) The supplier shall provide and install one (1) flowmeter to be installed at the pump station as shown in the drawings.
- 2) The meter shall be of the propeller-type and shall be suitable for a normal flow of 108 cubic meters per hour and shall register within ( $\pm 2\%$ ) of the actual flow in normal operation between its minimum and maximum rates of flow.
- 3) The meter should be installed in accordance with the following pipe run requirements:
  - a) Upstream Requirement: The meter should be installed a minimum distance of five (5) times the pipe diameter downstream of any obstructions.
  - b) Downstream Requirements: The downstream run should be a minimum of one (1) diameter of straight pipe length after the meter.
- 4) The register shall have at least six digit straight-reading-type totalizer which shall indicate flows in cubic meters.
- 5) The flowmeter shall be designed to operate at 1.03 Mpa (150psi) normal working pressure and at water temperature of range of 0 to 30 degrees centigrade.
- 6) The meter shall operate on the principle of recording (thru the register) the revolutions of the propeller as caused by the force of flowing water that strikes the blades.
- 7) The meter body (casing) shall be protected against corrosion with epoxy coating (or with approved equivalent), shall have the same inside diameter throughout its length, and shall be furnished with non-corrosive, non-toxic liners with flows straightening vanes equally spaced apart.
- 8) The propeller drive shall be magnetically coupled to the register drive by means of permanent type ceramic magnets.
- 9) The propeller should be sufficiently rigid to retain its shape during high flow conditions throughout the life of the meter with shaft made of stainless steel.
- 10) The propeller shall be designed for easy removal of the operating assembly from the body as complete unit without disturbing the connection to the pipeline.
- 11) Must passed the testing and calibration procedures, and results must be submitted to MNWD (with certification of testing and calibration).

### **V. CONTROL PANEL**

#### **Variable Frequency Drive (Main Controller)**

##### **A. GENERAL SPECIFICATIONS**

The Variable Frequency Drive (VFD) shall act as the main starter, it shall be adequately sized and capable to handle the operations of the pump load with a minimum rating of 75Hp, 460VAC, 3-phase, 60Hz at different conditions of the day. The VFD must be installed indoor, wall-mounted type, with viewing glass, complete with Manual Transfer Switch (MTS), associated accessories and cabling works (feeder and control cables including pipes and accessories from existing control panel to VFD panel) and shall be completely wired in NEMA enclosure.

The VFD and all associated equipment shall be UL listed according to UL 508C-Power Conversion equipment and a UL approved for mounting in plenums and compartments handling conditioned air. It shall be designed, constructed and tested in accordance with UL, NEMA and NEC standards. A UL label shall be attached on the enclosure.

The VFD shall be able to respond accordingly with the signal transmitted in such a way that the needed pressure in the distribution system is attained and satisfied. The VFD shall be capable to operate or adaptable to MNWD existing transformer connection (grounded secondary) as a standard of CASURECO II, the local power provider.

#### B. VFD MINIMUM TECHNICAL FEATURES:

- 1) Built-in electronic motor overload protection
- 2) Self-tuning to motor parameters
- 3) NEMA 12 enclosure from 10 to 200Hp
- 4) 200-240V or 380-480V three-phase input voltage
- 5) Detachable/Non-detachable smart keypad with 16-character backlight LCD display with three-liner (minimum) screen, providing parameter identification using clear informative text. Parameter set-up should be performed quickly and easily.
- 6) 50/60Hz nominal frequency
- 7) Capable of pump control (start/stop) to reduce surges during starting and stopping of centrifugal pump by smooth acceleration and deceleration of motor, respectively.
- 8) Metering Devices:
  - a. Three-phase current
  - b. Three-phase voltage
  - c. Power in Kw
  - d. Power consumption in Kwh
  - e. Elapsed time/run time
  - f. Motor thermal capacity/temperature
- 9) Fault display indicator:
  - a. Ground/line fault
  - b. Power loss
  - c. Voltage/current/phase unbalance
  - d. Phase reversal
  - e. Over/under voltage
  - f. No/Under/Over load
  - g. Over temperature
  - h. Dry run detection
- 10) Protective features
  - a. Over / under voltage
  - b. Motor short circuit protection
  - c. Motor over-current
  - d. Instantaneous over-current
  - e. Phase loss / phase imbalance detection
  - f. Over / under load supervision
  - g. Stall protection
  - h. VFD over-temperature

- i. External trip input
- j. Motor thermistor input
- k. Loss of reference / feedback (4 – 20 mA)
- l. Built-in MOV (surge protection)
- 11) Control features
  - a. Local/remote control
  - b. DC breaking
  - c. Torque boost
  - d. Adjustable V/Hz profile
  - e. Maximum/minimum adjustable motor speed limits
  - f. Adjustable output current limit
  - g. Jog start and PID regulator
- 12) Display readings
  - a. Motor speed
  - b. Frequency
  - c. Voltage
  - d. Current and torque
  - e. Input/output power (Kw)
  - f. Fault identification
  - g. Elapsed time/run time
- 13) Ambient: 14° F (-10° C) to 113° F (45° C), 330 ft. (1,000m) altitude, 90% humidity, non-condensing.
- 14) Energy-saving flow compensation
- 15) User-friendly for quick and easy operation

#### C. MCCB AND OTHER COMPONENTS

- 1) Enclosure shall be powder-coated based on NEMA 12 (minimum) gasket- type, with viewing glass, wrinkled beige finish using epoxy powder paint, oven-baked.
- 2) 1 unit MCCB rated in amperes (capacity depending on size of motor)
- 3) 1 unit rotary-type manual transfer switch (MTS) rated in amperes
- 4) 1 unit control transformer rated in volt-ampere (VA)
- 5) 1 unit phase and voltage protection relay
- 6) Pilot lights: 1 unit green LED light (RUN)
  - 1 unit red LED light (STOP)
  - 1 unit yellow LED light (FAULT/RESET)
- 7) Push button switch: 1 unit push button (RUN)
  - 1 unit push button (STOP)
  - 1 unit push button (FAULT/RESET)
- 8) Equipped with exhaust fans as cooling device.
- 9) Equipped with water level relay or floatless relay.
- 10) Equipped with manual selector switch for HAND/OFF/AUTO (HOA) selections.

#### D. FIELD WIRING

- 1) Includes wires to and from tapping point of splicing (sizes and length of wires may vary).
- 2) Includes uPVC pipes and flexible hose as enclosure of wirings (sizes and length of conduits may vary).
- 3) Includes terminal blocks/lugs, straps, wrap, markers for proper termination.

#### E. FIELD INSTRUMENTATION

- 1) Pressure transmitter should be provided complete with the following specifications:
  - Pressure ratings : 0 – 10 bars or 0 – 16 bars
  - Output signal : 4 – 20mA

Input Voltage : 7 – 33 VDC  
Process connection : ½" National Pipe Thread (NPT)  
Wirings : Stranded wire (size and length may vary)  
uPVC pipe or flexible hose for wire enclosure

- 2) Installation manual should be provided.

#### F. ENGINEERING WORKS

- 1) Assembly of motor control panel as specified from scope of work
- 2) Delivery and installation
- 3) Testing and Commissioning
- 4) Training of MNWD personnel on the operation and handling of equipment
- 5) As-built plan

#### G. WARRANTY

- 1) Contractor/Supplier should provide one (1) year warranty against factory defects under normal operating condition.

#### **Soft Starter (Back-up Controller)**

##### A. GENERAL SPECIFICATIONS

The Soft Starter (SS) shall act as back-up starter in cases the VFD is not operational. The SS shall be adequately sized and capable to handle the operations of the pump load with a rating of 75Hp, 460V, 3-Phase, 60 Hz at starting and stopping conditions. The pump load shall be able to operate at soft starting and soft stopping in accordance to the programmed acceleration and deceleration times, the soft starter shall be able to respond accordingly with the programmed parameters and shall be able to detect all standards protections as set therein, the soft starter controller shall be provided with all standard accessories such as breakers, relays, current transformers, protective devices, meters, push buttons, pilot lights and other standard accessories and shall be completely wired in NEMA enclosure.

##### B. STANDARD TECHNICAL FEATURES:

- 1) 200-240V or 380-480V, 50/60 Hz input power supply
- 2) Programmable auxiliary contacts
- 3) Three-phase SCR controller
- 4) Built-in bypass SCR
- 5) Three-phase current transformer
- 6) Built-in Electronic Motor Overload Protection
- 7) Ground fault protection
- 8) Capable of pump control (Start/Stop)
- 9) Pump control module with built-in anti backspin timer
- 10) LCD display : Minimum three line 16-character backlit LCD display provides parameter identification using clear and informative text.
- 11) Metering devices:
  - a. Three-phase current
  - b. Three-phase voltage
  - c. Power in KW
  - d. Power Factor
  - e. Elapsed time / Run time
  - f. Motor thermal capacity
- 12) Fault display:
  - a. Ground / Line fault

- b. Power loss
  - c. Voltage / Current / Phase imbalance
  - d. Phase reversal
  - e. Over / under voltage
  - f. No / under / over load
  - g. Over temperature
  - h. Number of start / stop
  - i. Shorted SCR
  - j. Bypass failure
  - k. Dry run detection
- 13) Protective features:
- a. Motor overload
  - a. Under and over current
  - b. Power supply phase loss
  - c. Motor phase loss
  - d. Phase reversal
  - e. Soft starter over temperature and external fault
  - f. Built-in MOV (surge protection)
  - g. Under / over voltage
  - h. Over temperature
- 14) Control features:
- a. Local / remote control
  - b. Acceleration and deceleration independently adjustable ramps
  - c. Bypass relay
  - d. JOG
  - e. DC breaking
  - f. Energy saving
  - g. Auto-reset and fault history
- 15) Display readings:
- a. Motor speed
  - b. Frequency
  - c. Voltage
  - d. Current and torque
  - e. Input/output power (Kw)
  - f. Fault identification
  - g. Elapsed time/run time
  - h. Motor amps
  - i. Fault identification
- 16) Ambient : 14° F (-10° C) to 113° F (45° C), 300 m (1,000 ft.) altitude, 90% humidity, non-condensing.
- 17) Detachable / non-detachable keypad with LCD display

#### C. MCCB AND OTHER COMPONENTS

- 1) Enclosure shall be powder-coated based on NEMA 12 (minimum) gasket-type, with viewing glass, wrinkled beige finish using epoxy powder paint, oven-baked.
- 2) 1 unit MCCB rated in amperes (capacity depending on size of motor)
- 3) 1 unit rotary-type manual transfer switch (MTS) rated in amperes
- 4) 1 unit control transformer rated in volt-ampere (VA)
- 5) 1 unit phase and voltage protection relay
- 6) Pilot lights: 1 unit green LED light (RUN)  
1 unit red LED light (STOP)  
1 unit yellow LED light (FAULT/RESET)
- 7) Push button switch: 1 unit push button (RUN)  
1 unit push button (STOP)



- 1 unit push button (FAULT/RESET)
- 8) Equipped with exhaust fans as cooling device.
- 9) Equipped with water level relays or floatless relays.
- 10) Equipped with manual selector switch for HAND/OFF/AUTO (HOA) selections.

#### D. FIELD WIRING

- 1) Includes wires to and from tapping point of splicing (sizes and length of wires may vary).
- 2) Includes uPVC pipes and flexible hose as enclosure of wirings (sizes and length of conduits may vary).
- 3) Includes terminal blocks/lugs, straps, wrap, markers for proper termination.

#### E. FIELD INSTRUMENTATION

- 1) Pressure switch should be provided complete with the following specifications:
  - Pressure ratings : Diff : 0 – 10 psi and 0 – 350 Kpa  
Main : 0 – 2 Mpa and 0 – 300 psi
  - Process connection : ½" NPT
  - Wirings : Stranded wire (size and length may vary)  
uPVC pipe or flexible hose for wire enclosure
- 2) Installation manual should be provided.

#### F. ENGINEERING WORKS

- 1) Delivery and installation
- 2) Assembly of motor control panel as specified from scope of work
- 3) Testing, commissioning, start-up and monitoring
- 4) Training of MNWD personnel on the operation and handling of equipment
- 5) As-built plan

#### G. WARRANTY

- 1) Contractor/Supplier should provide one (1) year warranty against factory defects under normal operating condition.

### VI. GATE VALVE

- 1) Must be wheel type butterfly gate valve.
- 2) Body and bonnet made of grey cast iron, CG-25 to DIN 1691.
- 3) Electrostatically coated with epoxy resin to DIN 30677, internally and externally.
- 4) Stainless steel stem with hand wheel.
- 5) Stem sealing of NBR wiper ring, 2 NBR, O-rings inside and 2 outside plastic bearing, NBR rubber manchette.
- 6) Wedge made of ductile iron, encapsulated with EPDM rubber with integral wedge nut and thrust collar of dezincification resistant brass.
- 7) Bonnet bolts made of zinc coated steel 8.8, hot melt sealed.

### VII. CHECK VALVES

- 1) Check valves shall have flanged connections and shall be of the swing-type with outside lever and weight.
- 2) Valve body shall be cast iron.
- 3) The valve shall have bronze gate and seat rings and type 416 stainless steel ring pin.

- 4) The check valve shall be field repairable. Disc, seats and other parts shall be replaceable without removing the valve from the line.

#### **VIII. PRESSURE GAUGE**

Pressure gauge shall have 100mm (4 inches) dial 6mm (1/4 inches) threaded connections and shut-off cock, oil-immersed. The pressure element of the gauge shall be protected against excessive pulsations and surges by an external snubber (range is 0 -150 psi).

#### **IX. PRESSURE SWITCH**

The Contractor shall furnish and install a pressure switch of the required setting range. The actual setting shall be determined by the Engineer in the field, upon testing and commissioning. The switch shall be single pole, single throw spring type for indoor and outdoor installation.

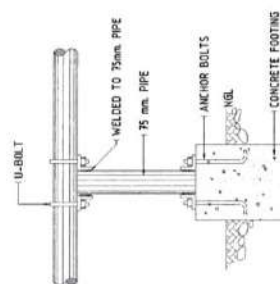
#### **X. AIR RELEASE VALVE**

- 1) The body and cover shall be of gray cast iron in accordance with ASTM A126, Class B or ductile iron in accordance with ASTM A536, Grade 65-45-12. The valve trim, float, and all working parts shall be constructed of stainless steel, brass, or other corrosion resistant material.
- 2) The base must be cast iron with galvanized steel bolt and nut.

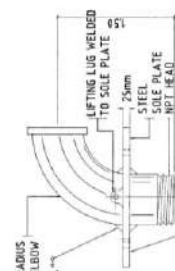
#### **NOTE:**

All materials and equipment must be brand new. All materials and equipment including labor from control panel to the submersible motor, complete with motor controllers, discharge elbow head and other appurtenances, as specified herein and shown on the drawings shall be included in the supplier/contractor scope of work including all expenses prior and after the installation, testing and commissioning. The supplier/contractor shall furnish, deliver, install, test and commission at site all mechanical/electrical equipment including all materials for discharge assembly specified herein (please see attached technical specifications and drawings). The supplier/contractor shall provide the necessary supervision, tools, materials, supplies and appurtenances for the proper installation, testing and operation of the completely assembled equipment.

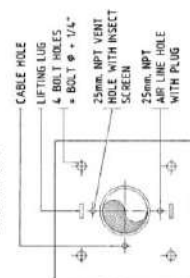
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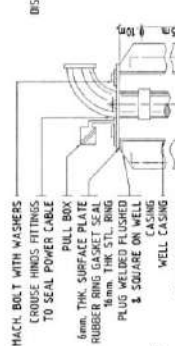
### PIPE AND TEE SUPPORT DETAIL



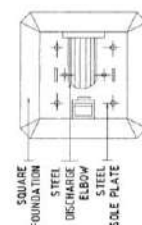
SECTION



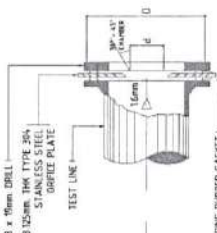
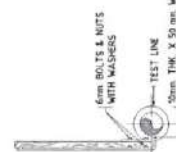
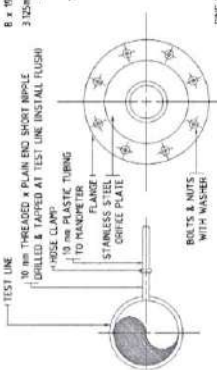
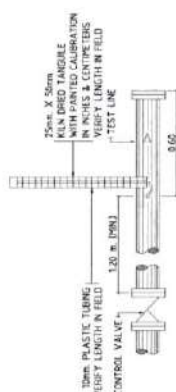
## PLAN









SECTION

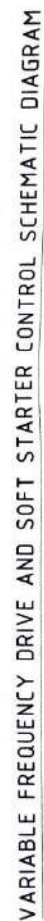


## PLAN

PUMP TEST LINE, ORIFICE, AND MANOMETER DETAIL<sup>5</sup>

100

 Republic of the Philippines <b>METROPOLITAN WATER DISTRICT</b> 4.0 J. Miranda Avenue, Naga City	PREPARED BY:	CHECKED BY:	RECOMMENDING APPROVAL:	APPROVED:	PROJECT TITLE/LOCATION:	SHEET NO.:	
	 SAMUEL A. ANDRES DE - City Engineer	 SONJIN O. MILLARES DE - City Manager A	 SONJIN O. MILLARES DE - City Manager A	 SONJIN O. MILLARES DE - City Manager A	 SONJIN O. MILLARES DE - City Manager A	PROPOSED CARDONA IV PUMPING STATION PUMP, ELECTRO-MECHANICAL EQUIPMENT, DISCHARGE LINE, AND ELECTRICAL EQUIPMENT	STANDARD MECHANICAL PLAN
							2
						6	

EED017, REV 00, AUGUST 5 2019





EEEDF17 REV. 00, AUGUST 5, 2019

PANEL : LIGHTING PANEL  
SERVICE : 1 PHASE, 230V , 60 Hz

#### A. COMPUTATION:

Use: 2C - 8.0 mm<sup>2</sup> THHN Cu Wire + 1C-5.5 mm<sup>2</sup> THHN Cu Wire  
In 25 mmØ uPVC Pipe

Use: 50 AT/50 AF, 2P, 230V, 60 Hz, CIRCUIT BREAKER

For Transformer kVA Rating

kVA Rating = 15.31 x 230  
kVA Rating = 3521.3  
Use: 5kVA, 460/230 V, 1Ø, 60 Hz

FOR 75 HP MOTOR OVERCURRENT PROTECTION

$$I = (2.5) 96$$
$$I = 240 \text{ amp.}$$

USE: 250 AT, 3P, 460 V, 60 HZ, CIRCUIT BREAKER

**FOR SERVICE DISCONNECTION:**  
**USE: 250 AT, 460 V BOLT-ON TYPE**  
**CIRCUIT BREAKER**

$$\begin{aligned} &= \frac{80005.12 + 25\%(76485.12)}{460 \times \sqrt{3}} \\ &= 124.41 \text{ amp.} \\ &= \frac{3520 + 25\%(76485.12)}{460 \times \sqrt{3}} \\ &= 244.41 \text{ amp.} \end{aligned}$$

## E. FOR TRANSFORMER KVA RATING

124.41 x 460 x  $\sqrt{3}$ 
$$\text{KVA RATING} = \frac{\text{---}}{1000}$$
$$\text{KVA RATING} = \frac{99.12}{\phantom{0.8}}$$

KVA RATING = 33.04  
USE : 2.275 KVA DISTRIBUTION TRANSFORMER

## COMPUTATIONS OF LOAD



PROJECT TITLE/LOCATION	APPROVED	RECOMMENDING APPROVAL	CREATED BY	PREPARED BY	PROJECT TITLE/LOCATION	APPROVED	RECOMMENDING APPROVAL	CREATED BY	PREPARED BY
PROPOSED CAROLINA IV PUMPING STATION RIMP, ELECTRO-MECHANICAL EQUIPMENT, DISCHARGE LINE, AND ELECTRICAL EQUIPMENT	FLORENCE T. MONICOSO JR., CSEE General Manager A	ROQUE S. FRANCISCO CSE, 08/15/01	Calderon	SAMUEL A. AMORES C. 014 - 07/24/00	Republic of the Philippines METROPOLITAN NAGA WATER DISTRICT 4.0 J. Miranda Avenue, Naga City	AS SHOWN	5	6	



**LEGEND :**

(A)	PRESSURE TRANSMITTER
(B)	VFD CONTROL CIRCUIT
(C)	SOFT STARTER CONTROL CIRCUIT
(D)	BLOWER FAN

### SINGLE LINE DIAGRAM



## Section VIII. Bill of Quantities

PROJECT: FURNISHING OF LABOR AND MATERIALS FOR THE SUPPLY AND INSTALLATION OF CAROLINA IV PUMPING STATION PUMP, ELECTRO-MECHANICAL EQUIPMENT, DISCHARGE LINE, AND ELECTRICAL EQUIPMENT

Project Reference Number: INFRA 2023-006

ITEM NO.	DESCRIPTION	QTY.	UNIT	UNIT COST	AMOUNT
1	FURNISHING OF LABOR AND MATERIALS FOR THE SUPPLY AND INSTALLATION OF CAROLINA IV PUMPING STATION PUMP, ELECTRO-MECHANICAL EQUIPMENT, DISCHARGE LINE. AND ELECTRICAL EQUIPMENT				
	<u>WORK INCLUDES:</u>				
	I. ELECTRO-MECHANICAL EQUIPMENT				
	a. Materials				
	Submersible Deep Well Pump rated to deliver 60 LPS @ 218.22 ft. (66.51m) design TDH. 6" Ø riser pipe connection. Made of Heavy Duty Stainless Steel; Corrosion Resistant; Complete with Cable Guard and Built-in Jam-Free Check Valve.	1	unit		
	Submersible Motor 75HP, 460V, 3-Phase, 60Hz, 1.15 SF. Stainless Steel; Double flanged NEMA mounting design; Stainless splined shaft; External sand slinger on shaft; Copper bar rotor. Complete with motor lead wire.	1	unit		
	6" Ø x 10ft uPVC Column Pipe , Heavy Type, Square Thread with Rubber Seals and Coupler	21	pcs		
	6" Ø Top and Bottom Adaptor (male end connection), stainless	1	set		
	Pump Guard with connector	1	pc		
	Well seal 14" x 14" x 1" with 150mm Ø bore with flange and elbow (long radius)	1	pc		
	Submersible Cable, 3C-38mm <sup>2</sup>	100	mtrs		
	TW Wire #14 stranded	1	box		
	Splicing Kit 82-A3	1	lot		
	Splicing Tapes (Rubber Tapes, Electrical Tapes)	1	lot		
	Pull Box 12" x 12", electrically insulated	1	unit		
	Variable Frequency Drive (VFD) suited for 75HP, 460V, 3-Phase, 60Hz with graphical display includes supply and delivery. The whole panel is assembled in NEMA 12 enclosure complete with MCB/MCCB rated depending on motor size, by-pass contactor, thermal overload relay, lightning arrester, liquid level (well) control relay, start/stop push button, pilot lights, ammeter and voltmeter transfer switches and HOA selector switch. (Please refer to approved plans.)	1	assy.		
	Pressure Transmitter 0 - 10 bars, 4 - 20mA, with shielded wire.	1	unit		
	Soft starter suitable for 75HP, 460V, 3-Phase, 60Hz. Complete with MCB/MCCB rated depending on motor size, magnetic contactor with start/stop push buttons, pilot lights, liquid level control relay with electrodes, overload relay, under/over voltage relay, lightning arrester, with phase failure and phase imbalance relay, ammeter, voltmeter, ATS, VTS and HOA selector switch mounted in NEMA 12 enclosure. (Please refer to approved plans.)	1	assy.		
	b. Labor for Delivery, Installation, Testing, and Commissioning	1	lot		
	II. DISCHARGE LINE				
	a. Materials				
	Discharge Pipe, BI, 6" Ø x 20 ft., sch. 40, seamless	2	pcs		
	Dynamic/ Combination Air Release Valve 1"	1	pc		
	Air Release Valve 1"	1	pc		

ITEM NO.	DESCRIPTION	QTY.	UNIT	UNIT COST	AMOUNT
	Discharge Elbow 6" Ø x 90°, flange-type (Long Radius)	1	pc		
	Sleeve-Type Coupling with harness 6" Ø (Adapted to BI Pipe)	2	pcs		
	Flow meter, 6" Ø	1	pc		
	C.I. Check valve 6" Ø with counterweight, Flange-type	1	pc		
	Pressure Gauge, 6" x 150 PSI, oil-filled	2	pcs		
	Pressure switch	1	pc		
	Pressure switch / gauge assembly	1	pc		
	BI Tee, 6" Ø, flange-type, weldable	1	pc		
	Manometer assembly	1	unit		
	Orifice Plate 100mm Ø x 180mm Ø	1	pc		
	C.I. Butterfly Valve 6" Ø with hand wheel, gear operated, Flange-type	2	pcs		
	Hose Bib assembly	1	unit		
	Fabricated B.I. elbow, 6" Ø x 45°, flange-type,	2	pcs.		
	Flexible conduit, LTC, 2" Ø	1	length		
	Straight connector, 2" Ø	1	set		
	PVC pipe with coupling, 2" Ø	1	length		
	PVC pipe with coupling, 3/4" Ø	1	length		
	PVC elbow, 2" Ø x 90°	1	lot		
	PVC elbow, 3/4" Ø x 90°	1	lot		
	Slip-on Flange 6" internal diameter, 8" BCD with	1	lot		
	Bolts and Nuts	1	lot		
	Chlorinator, 50 GPD @ 100 PSI	1	unit		
	150mm Ø x 1" Fabricated Steel Flange (Adapted to D.I. Gate Valve)	1	pc		
	b. Labor for Delivery, Installation, Testing, and Commissioning	1	lot		
II.	ELECTRICAL EQUIPMENT				
a.	Materials				
	3 Phase, 250A, 460 VAC Molded Case Circuit Breaker, Panel Mounted	1	unit		
	Manual Transfer Switch with two mechanical interlocked circuit breaker (250 AT, 3Ø, 460 V) with two pilot lamps indicator for normal cooperative power and emergency generator set power	1	unit		
	Dry Type Transformer, rated 5 KVA, 460 VAC primary, 230 VAC secondary, single phase, 60 HZ 2 - 2 1/2% above and below normal tapings, class H insulation, pad mounted and in NEMA 1 enclosure. The Unit shall be provided with 50AT/50AF circuit breaker protection at primary side	1	unit		
	38mm² THHN Cu. Wire including the wire to be used in the interconnection of the 3-37.5KVA Transformer	1	lot		
b.	Labor for Delivery, Installation, Energization, Testing, and Commissioning	1	lot		
<b>TOTAL</b>					

Submitted by:

\_\_\_\_\_  
Signature over Printed Name

\_\_\_\_\_  
Official Designation

\_\_\_\_\_  
Company Name

\_\_\_\_\_  
Date

Note:

This will form part of our bid proposal, hence, our Company undertakes to provide all of them as part of the contract without additional cost.

## ***Section IX. Checklist of Technical and Financial Documents***

### **Notes on the Checklist of Technical and Financial Documents**

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

- a. GPPB Resolution No. 09-2020 on the efficient procurement measures during a State of Calamity or other similar issuances that shall allow the use of alternate documents in lieu of the mandated requirements; or
- b. any subsequent GPPB issuances adjusting the documentary requirements after the effectivity of the adoption of the PBDs.

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

# Checklist of Technical and Financial Documents

## I. TECHNICAL COMPONENT ENVELOPE

### *Class “A” Documents*

#### Legal Documents

- ☐ (a) Valid PhilGEPS Registration Certificate (Platinum Membership) (all pages) in accordance with Section 8.5.2 of the IRR;

#### Technical Documents

- ☐ (b) Statement of the prospective bidder of all its ongoing government and private contracts, including contracts awarded but not yet started, if any, whether similar or not similar in nature and complexity to the contract to be bid; **and**

- ☐ (c) Statement of the bidder’s Single Largest Completed Contract (SLCC) similar to the contract to be bid, except under conditions provided under the rules;

Item (g) Statement of the Bidder’s Single Largest Completed Contract (SLCC) shall be supported by the following:

- a. Notice of Award and / or Notice to Proceed;
- b. Certificate of Final Acceptance and Constructors Performance Evaluation System (CPES) Final Rating, which must be at least satisfactory, in case of contracts with private sector an equivalent document shall be submitted.

**and**

- ☐ (d) Philippine Contractors Accreditation Board (PCAB) License;  
**or**

Special PCAB License in case of Joint Ventures;

**and** registration for the type and cost of the contract to be bid; **and**

- ☐ (e) Original copy of Bid Security. If in the form of a Surety Bond, submit also a certification issued by the Insurance Commission;  
**or**

Original copy of Notarized Bid Securing Declaration; **and**

- (f) Project Requirements, which shall include the following:
- |                          |   |
|--------------------------|---|
| <input type="checkbox"/> | a. Organizational chart for the contract to be bid;   |
| <input type="checkbox"/> | b. List of contractor’s key personnel ( <i>e.g.</i> , Project Manager, Project Engineers, Materials Engineers, and Foremen), to be assigned to the contract to be bid, with their complete qualification and experience data; |
| <input type="checkbox"/> | c. Contractor’s Letter Certificate to Procuring Entity;   |
| <input type="checkbox"/> | d. MNWD Certification issued for bidders without pending project with slippage of more than 10% at the time of posting of Invitation to Bid;  |

- ☐ e. 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;
- ☐ f. Certificate of Availability of Equipment; and
- ☐ (g) Warranty Certificate: **One (1) year against structural defects/failures; and, Three (3) years against factory defects under normal operating condition for Pump and Motor; and,**
- ☐ (h) After Sales/Service/Parts Certificate; and,
- ☐ (i) 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

- ☐ (j) The prospective bidder's computation of Net Financial Contracting Capacity (NFCC).

***Class "B" Documents***

- ☐ (k) 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**

- ☐ (l) Original of duly signed and accomplished Financial Bid Form; and

Other documentary requirements under RA No. 9184

- ☐ (m) Original of duly signed Bid Prices in the Bill of Quantities; and
- ☐ (n) 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
- ☐ (o) Cash Flow by Quarter.

