

# **POLOMOLOK WATER DISTRICT**

**Polomolok South Cotabato**

## **BIDDING DOCUMENTS**

**For the**

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***EXPLORATORY/  
PRODUCTION WELL  
DRILLING AT BRGY.  
CROSSING PALKAN***

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**APRIL 2024**

# Preface

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

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

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

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

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

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

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

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

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

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

**BAC** – Bids and Awards Committee.

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

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

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

**BIR** – Bureau of Internal Revenue.

**BSP** – Bangko Sentral ng Pilipinas.

**CDA** – Cooperative Development Authority.

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

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

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

**CPI** – Consumer Price Index.

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

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

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

**GFI** – Government Financial Institution.

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

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

**GOP** – Government of the Philippines.

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

**LGUs** – Local Government Units.

**NFCC** – Net Financial Contracting Capacity.

**NGA** – National Government Agency.

**PCAB** – Philippine Contractors Accreditation Board.

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

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

**PSA** – Philippine Statistics Authority.

**SEC** – Securities and Exchange Commission.

**SLCC** – Single Largest Completed Contract.

**UN** – United Nations.



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

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

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

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

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

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



REPUBLIC OF THE PHILIPPINES  
**POLOMOLOK WATER DISTRICT**

National Highway, Polomolok, South Cotabato

Tel Nos. (083) 500-926/ 500-9314/500-9340 / Telefax No. (083) 500-8008

**INVITATION TO BID FOR EXPLORATORY/  
PRODUCTION WELL DRILLING AT BRGY.  
CROSSING PALKAN**

1. The Polomolok Water District, through the Government of the Philippines under the Corporate Budget for the Contract approved by the Board for FY 2024 intends to apply the sum of **THREE MILLION THREE HUNDRED THOUSAND PESOS & 00/100 (PHP 3,300,000.00)**, inclusive of VAT and all other applicable government taxes, fees and other charges, being the Approved Budget for the Contract (ABC) to payments under the contract PB 25-14, **EXPLORATORY/ PRODUCTION WELL DRILLING AT BRGY. CROSSING PALKAN**. Bids received in excess of the ABC shall be automatically rejected on bid opening.
2. The Polomolok Water District now invites bids for the above Procurement Project. Completion of the Works is required within 110 calendar days from receipt of Notice to Proceed or Purchase Order. Bidders should have completed, within 3 years from the date of submission and receipt of bids, 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 Polomolok Water District and inspect the Bidding Documents at the address given below from 8:00 AM to 5:00 PM and/or at the PhilGEPS website and Polomolok Water District website.
5. A complete set of Bidding Documents may be acquired by interested Bidders on **April 15, 2024** from the given address and website(s) below:

PhilGEPS website (<https://www.philgeps.gov.ph>) and Polomolok Water District website ([polwaterdistrict.gov.ph](http://polwaterdistrict.gov.ph)) *and upon payment of the applicable fee for the Bidding Documents, pursuant to the latest Guidelines issued by the GPPB, in the amount of **PHP 5,000.00**. The bidder shall present its proof of payment for the fees by facsimile (083 – 500 – 8008), or through e-mail ([bacpolwd@gmail.com](mailto:bacpolwd@gmail.com)) the scanned proof of the payment.*

6. The Polomolok Water District through its Bids and Awards Committee will hold a Pre-Bid Conference on **April 23, 2025, 1:30 PM** at the Conference Room, 2<sup>nd</sup> Floor Admin. Bldg. Polomolok Water District which shall be open to prospective bidders.

Prospective bidders can also attend **via video conferencing thru Zoom**. A link shall be provided by the BAC Secretariat.

7. Bids must be duly received by the BAC Secretariat at the address below on or before **May 9, 2025 at 1:30 PM**. If a bidder chooses to submit a soft copy of the bids online, the bidder shall send it to **a unique shared link which will be provided by the BAC Secretariat to a particular bidder**. The confidentiality of the submitted bids is protected by the bidder's password. 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, 2025 at 1:30 PM** at the Conference Room, 2<sup>nd</sup> Floor Admin. Bldg. Polomolok Water District. Bids will be opened in the presence of the bidders' representatives who choose to attend the Bid Opening at the address below and at the same time.
10. For the online submission of bids, the bidders will be given a link where to submit its bids. Bidders must submit a PDF copy of the notarized Bid Securing Declaration or a scanned copy of any acceptable form of Bid Security, together with the eligibility requirements, technical and financial proposals, as specified in the Bidding documents. The date and time appearing in the e-mail of BAC for the bids submitted online must be on or before **May 9, 2025 at 1:30 PM** to be on time.
11. The BAC shall open the online submitted bids with the bidder's password, which is only known to the bidder, during the opening of bids. This is to maintain the integrity of the government bidding process
12. The Polomolok Water District 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 IRR of RA No. 9184, without thereby incurring any liability to the affected bidder or bidders.
13. For further information, please refer to:

BAC - Secretariat  
Polomolok Water District  
TeleFax No. : (083) 500-8008  
E-mail address : **bacpolwd@gmail.com**

14. You may visit the following websites:

<https://www.philgeps.gov.ph> - PhilGEPS  
[polwaterdistrict.gov.ph](http://polwaterdistrict.gov.ph) - Polomolok Water District

*SGD*  
**JOENEIL S. ASILO**  
BAC Chairman

## ***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, *POLOMOLOK WATER DISTRICT* wishes to receive Bids for the **EXPLORATORY/ PRODUCTION WELL DRILLING AT BRGY. CROSSING PALKAN** with identification number *PB 25-14*.

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 *FY 2024* in the amount of **THREE MILLION THREE HUNDRED THOUSAND PESOS & 00/100 (PHP 3,300,000.00)**.

2.2. The source of funding is:

- a. GOCC and GFIs, the 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:

- a. 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 and/or through videoconferencing 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 special PCAB License in case of Joint Ventures, 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 Engineer, 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 PolWDship, 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 until *one hundred twenty days from the date of the opening of bids*. 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 15 shall be submitted for each contract (lot) separately.

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

## **20. Post Qualification**

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

## **21. Signing of the Contract**

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

## ***Section III. Bid Data Sheet***

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

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

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

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

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

# Bid Data Sheet

ITB Clause																															
5.2	For this purpose, contracts similar to the Project refer to contracts which have the same major categories of work, which shall be:  <i>WELL DRILLING/EXPLORATORY WELL</i>																														
7.1	<i>Not Applicable</i>																														
10.3	<i>PCAB License – Small B Category C &amp; D with Specialized Well Drilling</i>																														
10.4	<p>The following key personnel shall be present during the implementation of the project and must meet the required minimum years of experience set below:</p> <table><tr><th><u>Key Personnel</u></th><th><u>General Experience</u></th><th><u>Relevant Experience</u></th></tr><tr><td>Project Coordinator</td><td>at least 5 years in well drilling</td><td>3-5 years of relevant experience</td></tr><tr><td>Site Supervisor</td><td>at least 5 years in well drilling</td><td>3-5 years of relevant experience</td></tr><tr><td>Drilling Rig Operator</td><td>at least 5 years in well drilling</td><td>3-5 years of relevant Experience</td></tr><tr><td>Welder (minimum of 2 personnel)</td><td>at least 5 years in well drilling</td><td>3-5 years of relevant experience</td></tr><tr><td>Helper (2 personnel)</td><td>at least 5 years in well drilling</td><td>3-5 years of relevant experience</td></tr></table>	<u>Key Personnel</u>	<u>General Experience</u>	<u>Relevant Experience</u>	Project Coordinator	at least 5 years in well drilling	3-5 years of relevant experience	Site Supervisor	at least 5 years in well drilling	3-5 years of relevant experience	Drilling Rig Operator	at least 5 years in well drilling	3-5 years of relevant Experience	Welder (minimum of 2 personnel)	at least 5 years in well drilling	3-5 years of relevant experience	Helper (2 personnel)	at least 5 years in well drilling	3-5 years of relevant experience												
<u>Key Personnel</u>	<u>General Experience</u>	<u>Relevant Experience</u>																													
Project Coordinator	at least 5 years in well drilling	3-5 years of relevant experience																													
Site Supervisor	at least 5 years in well drilling	3-5 years of relevant experience																													
Drilling Rig Operator	at least 5 years in well drilling	3-5 years of relevant Experience																													
Welder (minimum of 2 personnel)	at least 5 years in well drilling	3-5 years of relevant experience																													
Helper (2 personnel)	at least 5 years in well drilling	3-5 years of relevant experience																													
10.5	<p>The minimum major equipment requirements are the following:</p> <table><tr><th><u>Equipment</u></th><th><u>Capacity</u></th><th><u>No. of Units</u></th></tr><tr><td>Drilling Rig</td><td>Minimum standard</td><td>1</td></tr><tr><td>Mud Pump</td><td>Minimum standard</td><td>1</td></tr><tr><td>Tanker</td><td>Minimum of 2 cu.m. capacity</td><td>1</td></tr><tr><td>Service Truck</td><td>Minimum of 4 cu.m. capacity</td><td>1</td></tr><tr><td>Arc Welding Machine</td><td>Minimum of 250 amperes</td><td>2</td></tr><tr><td>Oxy-acetylene Cutter</td><td>Minimum standard</td><td>1</td></tr><tr><td>Compressor</td><td>Minimum 1200 cfm</td><td>1</td></tr><tr><td>Generator Set</td><td>125 kVA</td><td>1</td></tr><tr><td>Test Pumping</td><td>Minimum of 60 Hp</td><td>1</td></tr></table>	<u>Equipment</u>	<u>Capacity</u>	<u>No. of Units</u>	Drilling Rig	Minimum standard	1	Mud Pump	Minimum standard	1	Tanker	Minimum of 2 cu.m. capacity	1	Service Truck	Minimum of 4 cu.m. capacity	1	Arc Welding Machine	Minimum of 250 amperes	2	Oxy-acetylene Cutter	Minimum standard	1	Compressor	Minimum 1200 cfm	1	Generator Set	125 kVA	1	Test Pumping	Minimum of 60 Hp	1
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Generator Set	125 kVA	1																													
Test Pumping	Minimum of 60 Hp	1																													

	Equipment with controller		
	E – log device	Minimum standard	1
	Well – camera	Minimum standard	1
	Other equipment as needed		
12	<i>Not allowed</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"> <li>a. The amount of not less than <b>PHP 66,000.00</b>, if bid security is in cash, cashier's/manager's check, bank draft/guarantee or irrevocable letter of credit; or</li> <li>b. The amount of not less than <b>PHP 165,000.00</b> if bid security is in Surety Bond.<sup>3</sup></li> </ul>		
16	<p>Each Bidder shall submit 1 original of the first and second components of its bid or two (2) password-protected Bidding Documents in compressed archive folders, in case of electronic bid submission, and which shall be submitted simultaneously. The first shall contain the technical component of the bid, including the eligibility requirements under Section 23.1 of this IRR</p> <p>For authentication purposes, all pages of the bidding documents for submission must be certified by the authorized signatory of the participating Bidder/Company. The bidders are also reminded to <b>PUT PROPER TAB ON EACH BIDDING DOCUMENTS</b>.</p> <p>Unsealed or unmarked bid envelopes, or in case of electronic bid submission, Bidding Documents not in compressed archive folders and are not password protected, shall be rejected. However, bid envelopes that are not properly sealed and marked shall be accepted, provided that the bidder or its duly authorized representative shall acknowledge such condition of the bid as submitted. The BAC shall assume no responsibility for the misplacement of the contents of the improperly sealed bid envelopes or improperly compressed or password-protected folder, or for its premature opening.</p>		
19.2	Partial bids are not allowed.		
20	<i>Permit to Drill</i>		
21	<p>The winning bidder shall submit the following additional documents relevant to the Project ten (10) calendar days from the receipt of the Notice of Award:</p> <ul style="list-style-type: none"> <li>- construction schedule and S-curve, manpower schedule, construction methods, equipment utilization schedule, <i>construction safety and health program approved by the Department of Labor and Employment</i>, and PERT/CPM or other acceptable tools of project scheduling.</li> <li>- Contractor's All Risk Insurance (CARI)</li> </ul>		

	<p>Note during the Implementation of the Project the winning bidder shall comply to the following:</p> <ul style="list-style-type: none"> <li>- Written request prior to the commencement of any activity for approval</li> <li>- Activity must strictly follow the activity sequence as listed above</li> <li>- Strata samples collected every meter shall be properly marked and submitted to PolWD</li> </ul> <p><b><i>Pump test results (i.e. step – drawdown and constant discharge result) shall be submitted to PolWD.</i></b></p>
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## ***Section IV. General Conditions of Contract***

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

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

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

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

## 1. Scope of Contract

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

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

## 2. Sectional Completion of Works

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

## 3. Possession of Site

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

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

## 4. The Contractor's Obligations

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

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



## **5. Performance Security**

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

## **6. Site Investigation Reports**

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

## **7. Warranty**

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

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

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

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

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

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

## **10. Dayworks**

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

## **11. Program of Work**

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

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

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

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

## **13. Advance Payment**

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

## **14. Progress Payments**

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

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

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

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

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

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

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

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

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

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

# Special Conditions of Contract

GCC Clause	
2	<p>The Intended Completion Date is One Hundred Ten (110) Calendar Days (including 18 pre-determined unworkable days and 30 calendar days for permit acquisition) which will commence from the date of receipt of the Notice to Proceed.</p> <ol style="list-style-type: none"> <li>1. Completion Date for Construction (Physical) Works is <b>One Hundred Ten (110) Calendar Days (including 18 pre-determined unworkable days and 30 calendar days for permit acquisition)</b>. This shall be utilized to complete the construction works and other related works necessary in the physical accomplishment of the project. Delays incurred after this duration shall be subject to negative slippage with corresponding liquidated damages to be determined by the assigned POLWD Project Inspector.</li> <li>2. <b>Submission of Complete Documentary Requirements is within 30 Calendar Days.</b> This shall be utilized to complete the necessary documentary requirements required for the completion of the project. <b>This shall commence upon issuance of letter of instruction to proceed with the documentation works which will come after the issuance of certificate of completion of the construction (physical) works. Submission of incomplete required documents shall be subject to non – payment of Final Billing.</b> The following documents shall form part of the documentary requirements required to be submitted within 30 calendar days: <ol style="list-style-type: none"> <li>A. 95% to 100% Project Accomplishment: <ol style="list-style-type: none"> <li>1. Request for joint inspection/punch listing</li> <li>2. Submission of the updated Performance Bond (if applicable)</li> <li>3. Request for Final Variation Order/Final Quantification with complete attachments: <ol style="list-style-type: none"> <li>a. Detailed Estimates</li> <li>b. Shop Drawings</li> <li>c. Documentation Pictures</li> </ol> </li> <li>4. Submission of complete As-Built Drawings for approval (20” x 30” tracing paper and A3 sheet size) including the Editable Auto CAD File. The schedule of submission of As Built Drawings shall be in accordance with the <b>SCC 15.1 and 15.2</b>; penalties for late submission shall be applied accordingly.</li> <li>5. Submission of five sets blue printed As Built Drawings (approved)</li> <li>6. Updated Well Driller Certificate of Registration issued by National Water Resource Board (NWRB)</li> </ol> </li> </ol> </li> </ol>

	<p>7. Request for joint inspection with DPWH/City Engineers/other concerned agencies, if applicable.</p> <p>B. After approval of Final Request for Variation Order</p> <ol style="list-style-type: none"> <li>1. Request for Final Inspection for Final Billing</li> <li>2. Submission of Final Billing with complete attachments</li> </ol> <p><b>NOTE:</b> The contract duration shall be reckoned from the start date which is from the receipt of the Notice to Proceed (NTP) and not from contract effectivity date.</p>
3.1	<p>The Procuring Entity shall give possession of all parts of the Site to the Contractor after a pre-construction meeting between authorized representatives of the Procuring Entity and the Contractor.</p>
4	<p>The Contractor shall employ the following <b>Key Personnel:</b></p> <p>[List key personnel by name and designation]</p> <p><b>Key Personnel Contractual Obligation:</b></p> <ol style="list-style-type: none"> <li>1. Supervision of Key Personnel are essential for successful accomplishment of the work to be performed under this contract. The Contractor agrees that such personnel shall be present at all times to supervise the execution of the contract division where it is obligated to perform professional services.</li> <li>2. It shall also agree that the contracted Key Personnel shall not be removed from the contract work or replaced without compliance with the following: <ol style="list-style-type: none"> <li>a. If the key personnel, for any justifiable reasons, becomes or is expected to become unavailable for work under this contract or is expected to devote substantially less effort to the work than indicated in the manpower utilization schedule or initially anticipated, the Contractor shall, only upon prior approval of the <b>Polomolok Water District</b> promptly replace personnel with personnel of equal ability or better qualifications. All requests for approval of substitutions hereunder must be in writing and provide a detailed explanation of the circumstances necessitating the proposed substitutions. The request must contain a resume for the proposed substitute, and any other information requested by the Contracting Officer. The Contracting Officer shall promptly notify the contractor of approval or disapproval in writing.</li> <li>b. If the Contractor introduces changes in Key Personnel for reasons not complying the provisions mentioned in Item a,</li> </ol> </li> </ol>

	<p>the Contractor shall be liable for the imposition of damages as described in Item c.</p> <p>c. When Item a and Item b are violated under this contract, an amount equal to one hundred percent (100%) of the total basic rate of the key Personnel for the duration of the engagement as indicated in the Contractor's detailed cost estimates, shall be deducted from the Contractor's Progress Billing.</p> <p>3. The Contract Division work components which requires the supervision of the Key Personnel shall only be considered for payment upon submission of the Supervising Key Personnel of a Certification/Undertaking that it has supervised and inspected the works according to the required specifications stipulated in the Contract. The Certification/Undertaking shall form part of the supporting documents for the request for progress billing.</p> <p>The Project Engineer of the Contractor shall be authorized to sign request for variation order, final billing, as built plan, and other documents to expedite processing and completion of works.</p> <p><b>NOTE:</b> The names of the Key Personnel and their designation shall be filled out by winning contractor prior to contract signing.</p> <p><b>Project Engineer</b> refers to the representative of the PolWD coming from the Engineering and Operations Department who is authorized to oversee all the works required in the execution of the contract. He/she shall act on behalf of the PolWD either directly, indirectly or through its authorized project inspectors while the construction work is in progress.</p> <p><b>Contractor's On-Site Representative/Project Coordinator</b> shall act in behalf of the Contractor and is authorized to sign, receive and/or accept service of any notice or document issued pursuant to this contract in behalf of the Contractor.</p> <p><b>PERMITS AND LICENSES:</b></p> <p>The procurement and payment of permits and licenses necessary for the project implementation shall be the responsibility of the Contractor. The PolWD shall provide assistance whenever necessary.</p>
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4.1	The schedule of delivery of the possession of the site to the Contractor, shall be in full to carry out the projects on its intended completion of date which is one hundred ten (110) calendar days.
6	No further instructions.
7.2	Five years (semi – permanent structures)
10	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>ten (10) calendar</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 <b>5% of the contract amount</b> .
13	The amount of the advance payment <i>shall not exceed 15% of the total contract price and schedule of payment</i> .
14	Materials and equipment delivered on the site but not completely put in place shall not be included for payment.
15.1	<p>The date by which “as built” drawings are required is 15 calendar days after the date of physical completion.</p> <p>However, the Contractor shall supply to the PolWD through Engineering and Operations Department the draft As-Built Drawings upon reaching ninety-five percent (95%) accomplishment to give ample time for review and checking. Upon reaching the 100 percent (100%) physical completion, the Contractor shall finalize its As-Built drawings and the final draft of the said drawings shall be submitted to the PolWD (PolWD) through its Production Division for final review and checking within the 15 calendar day’s period from project physical completion. The Production Division shall conduct its final review and checking within forty-eight (48) hours upon receipt of the Contractor’s final draft. The Contractor’s obligation to submit the correct As-built Drawings, which is ready for approval, must be done within 15 DAYS AFTER THE DATE OF PHYSICAL COMPLETION.</p>
15.2	The request for final payment shall not be processed pending submission and approval of the “ <b>As Built Plans</b> ” and <b>other required documents as stipulated in SCC Clause 2.</b>



## ***Section VI. Specifications***

### **Notes on Specifications**

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

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

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

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

#### **Sample Clause: Equivalency of Standards and Codes**

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

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

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

# **TECHNICAL SPECIFICATIONS**

## **1. GENERAL**

### **1.1 Technical Definition**

The following definitions shall apply:

- a. Borehole means any drilled section of boring before completion as defined in well below.
- b. Casing means unslotted or non-perforated lining tubes.
- c. Development Equipment means high velocity jetting tool, surge plunger and all other equipment needed to develop the well.
- d. Diameters mean nominal diameters unless otherwise stated.
- e. Drilling Rig means equipment and the auxiliary equipment for its operation
- f. Drilling Unit as defined in Clause 2.2 under this Section (Equipment).
- g. Final Well Design means the drawing and description prepared by the Engineer upon completion of the drilling of the pilot hole and geophysical borehole logging specifying the final well construction.
- h. Lining Materials means any casing, screen, slotted lining or perforated lining tube whether permanently or temporarily installed in the borehole.
- i. Pumping Unit as defined in Clause 8.7 under this Section (Definition of "Pumping Unit")
- j. Screens mean continuous wire wound stainless or low carbon steel screens, or slotted or perforated lining tube.
- k. Tentative Well Design means the contract drawing showing the estimated quantities of the work.
- l. Well means any completed hole in which all lining material has been set, all grouting completed and all temporary lining removed.

### **1.2 Technical Standards**

All materials or workmanship shall comply with the specifications. Other standards equal or superior to those enumerated in this specification, shall be acceptable, subject to the approval of the PolWD PIU representative. The opinion of the PolWD PIU representative must be obtained prior to utilizing such materials or workmanship on or off the site.

### **1.3 Water Supply and Illumination**

In the absence of adequate quantities of water or illumination required for drilling at the drilling site, the Contractor shall make such arrangements including the provision for mobile tanks or fixed as may be necessary to ensure a supply of water and illumination sufficient for drilling operations.

### **1.4 Electrical Power Supply**

- (1) The Contractor will make arrangements as may be necessary for the connection of or supply of power to site.

- (2) Payment for the provision of electrical power supplies as specified in the sub-clause 1.4 (1) shall be deemed to be included in the rates entered in the tendered price for setting up equipment at the site, drilling rates and rates entered for operation of pumping unit.

#### 1.5 Storage of Inflammables

The Contractor shall comply with all local authority regulations applicable to the use and storage of diesel oils, petrol, paraffin, and other inflammable fuels used by him on the site, and shall ensure that adequate precautions are taken against fire.

#### 1.6 Boundaries of work

The PolWD shall provide land or rights-of-way for the work specified in this Contract and make suitable provisions for ingress and egress, and the Contractor shall not enter or occupy with men, tools, equipment or material, any ground outside the property of the PolWD without the written consent of the PolWD of such property. Other Contractors and employees or agents of the PolWD may, for all necessary purposes, enter upon the work premises used by the Contractor, and the Contractor shall conduct his work so as not to impede unnecessarily any work being done by others on or adjacent to the site.

#### 1.7 Access Roads

Improvement of access roads to the wells shall, unless otherwise agreed, be done by the Contractor at his own cost, which is deemed to be included in the contract sum. The access road shall be kept in proper condition during the entire construction period.

#### 1.8 Protection of Site

- (1) Except as otherwise provided herein, the Contractor shall protect all structures, walks, pipelines, trees, shrubberies, lawns, etc., during the progress of his work; shall remove from the site all drill cuttings, debris, and unused materials, and shall upon the completion of the work restore the site as nearly as possible to its original condition, including removal of access tracks and the replacement, at the Contractors' sole expense of any facility or landscaping which has been damaged beyond restoration to its original condition all to the satisfaction of the PolWD PIU representative.
- (2) Water pumped from the well shall be disposed to a place approved by the PolWD PIU representative where it will be possible to dispose the water without damage to property or creation of a nuisance.

#### 1.9 Site to be Kept Tidy

The Contractor shall always keep the site and all working areas organized and hazard free.

#### 1.10 Shop Drawings

- (1) The Contractor shall, if requested by the PolWD PIU representative prior to start of each operation, produce for the PolWD PIU representative's approval shop drawings showing details of technical operations such as test of plumbness and alignment, the method of the slotted casing production, if so required, the methods of placement of formation stabilizer and/or cement grout, the arrangement for well testing, the

method for well development and all other drawings pertinent to the well drilling, well construction operations and well development as requested by the PolWD PIU representative.

#### 1.11 Well Head Protection

- (1) At all times during the progress of the work, the Contractor shall protect the well in such manner as to effectively prevent either tampering with the well or the entrance of foreign matter into it, and upon its completion he shall provide and install a well head cap satisfactory to the PolWD PIU representative.
- (2) In the event that the well becomes contaminated or that water having undesirable physical or chemical characteristics has entered the well due to the negligence of the Contractor, he shall at its own expense perform such work or supply casings, seals, sterilizing agents or other materials as may be necessary to eliminate the contamination or to exclude any undesirable water in the well.

#### 1.12 Transport of Personnel and Equipment

- (1) The contractor shall supply and operate all transport required for transporting his employees, materials and equipment.
- (2) The cost of movement of personnel, materials and equipment shall be included in the rates given for drilling development and pump operation.

#### (1) 1.13 Site Preparation and Reinstatement

- (1) The contractor shall prepare the site, provide all necessary tanks and pits and make all necessary arrangements for erecting and dismantling the drilling unit and shall reinstate the site on completion of such phase of work to the satisfaction of the PolWD PIU representative.
- (2) Payment shall be deemed to be included in the items entered in the tendered price for erection and dismantling of drilling rigs.

#### 1.14 Permits

The procurement and payment of all permits necessary in the project implementation shall be the responsibility of the Contractor in the name of the PolWD. Cost of permits to be used by the Local Government Units (LGUs) and National Agencies such as the Department of Public Works and Highways (DPWH), National Water Resources Board (NWRB), shall be deemed as included in the unit prices of every item in the contract. No separate payment will be paid to the Contractor for any permit arising from the work items in the contract.

The PolWD shall provide assistance whenever necessary. The Contractor shall secure a permit to operate from the Municipality of Polomolok Mayor's Office for the work activities encroaching upon the road lane within the Municipality.

#### 1.15 Barricades and Signages w/ Warning Lights

The Contractor is responsible for providing and maintaining barricades and signages with warning lights as shown in the drawings. The warning signages should be positioned before and after the road barriers, at distances deemed appropriate for detours throughout the entire duration of heavy equipment operations along the road. These will serve as warning signs to ensure the safety of the motorists and pedestrians during the construction period.

### 1.16 Traffic Coordination and Maintenance of Traffic

The Contractor shall provide traffic aides and watchmen/flagmen, when necessary, to ensure smooth flow of traffic. Where road closures or detours are permitted by the concerned local authorities, the Contractor shall determine the appropriate agencies, boards, or departments the Contractor must notify prior to taking the action and the proper advance notice to be provided to each body.

Coordination with local police department and agencies concerned with vehicular traffic problems shall be the responsibility of the Contractor. Prior to the start of the activities, the Contractor shall show proof to the PolWD PIU representative that the aforesaid coordination was made and shall present to the PolWD PIU representative for approval the safety arrangement and traffic deviation or rerouting program.

### 1.17 Demolition/Removal of Existing Structure

- (1) The scope and extent of the demolition shall be properly observed as specified herein and shall be disposed properly at the expense of the Contractor and deemed included in the unit price of the contract. The contractor shall have validated the project site before tendering its bid price.
- (2) All demolished materials shall undergo inspection by the PolWD PIU representative for identification of salvageable materials. All salvageable materials shall be transported by the Contractor to the area specified by the PolWD PIU representative, while other materials identified for disposal shall be disposed of in accordance with all applicable laws and local ordinances at the Contractor's expense.
- (3) The existing structures that are subject for removal/demolition are the Existing trees and any other structure necessary for the implementation of the project.

## 2. WELL DRILLING

### 2.1 Scope

- (1) The Contractor shall provide and operate one or more mobile Drilling Units required in completing the works within the contract period.
- (2) The Contractor shall provide all auxiliary equipment, lubricants, fuels and spares necessary to keep the drilling rig(s) in continuous operation.

### 2.2 Equipment

- (1) The drilling rig(s) together with all auxiliary equipment and personnel shall be defined as the Drilling Unit(s).
- (2) All rigs shall have sufficient capacity to drill the specified borehole(s) in the diameters specified in the tentative well design(s) to a depth which is, at the minimum, 10% higher than indicated in the Contract Drawings.
- (3) Payment for drilling shall be by linear meter of borehole as measured after removal of drill string. The rates set against drilling items in the tendered price shall be deemed to include all equipment, personnel, fuels, and lubricants and the accessories required for operation of the Drilling Unit.
- (4) When the Drilling Unit is being used for a purpose other than drilling, then the rates for that purpose entered in the tendered price shall be deemed to include the running costs of the Drilling Unit.

### 2.3 Drilling Method

- (1) All drilling shall, unless otherwise specified in the Special Provisions, be performed with the rotary drilling method
- (2) The Contractor shall drill the hole to such depth and with such diameter, which shall enable an easy installation of casing and screen and placement of gravel envelope with a uniform thickness as specified, if required. During drilling of the hole, the Contractor shall ensure that the natural permeability of the yielding strata near the well bore is not irreversibly reduced due to the drilling method employed.

### 2.4 Pilot Borehole Drilling

The Contractor shall first drill the 200mm Diameter pilot borehole as specified in the preliminary well design to a target depth of 150m linear meters. The Contractor shall take all measures necessary to protect the borehole from caving. Drilling of pilot hole directly to 450mm Diameter is not allowed. The second drilling step is to ream the pilot hole to its full diameter as specified in the preliminary well design and in the bill of quantities. If the Contractor will introduce a methodology other than specified herein, it shall seek approval from the Engineering Operations Department through the Production Division and Construction & maintenance Division.

### 2.5 Strata Sampling/Material Testing

- (1) Strata samples shall be taken at one-meter intervals or more frequent if the formation penetrated changes. Samples shall be placed in plastic or other appropriate bags on which or in which the sampling depth and the date of sampling is written in such a manner that it is permanently readable.
- (2) The sampling procedure must provide that all the fraction of the penetrated strata is present in the sample.
- (3) Each sample shall be placed in a wooden box with space for storage of one sample and the sampling depth shall be written on the box.
- (4) A record of samples taken with the details described above shall be submitted to the PolWD PolWD PIU representative.
- (5) Payment for sampling shall be deemed to be included in the rates entered for drilling in the tendered price.
- (6) Properly measure and record each meter well depth.
- (7) The contractor shall remedy, as deemed necessary, any failure at no cost to the PolWD.
- (8) Failure of the Contractor to perform the above standard procedures will entitle the Polomolok Water District to deduct the sum of FIVE HUNDRED PESOS (P500.00) from the total contract price as penalty for each sample not obtained, preserved, delivered, recorded and submitted to PolWD PolWD PIU representative.

### 2.6 Drilling Mud

- (1) Bentonite, if used, shall be of premium quality in accordance with API Standard 13A with 150 kg/cum of make-up water yielding a mud with a viscosity of between 35 and 40 seconds using a Marsh funnel and a mud weight of less than 1.10 kg/l (9.2 lbs/US gal.)
- (2) Make-up water shall be treated with caustic soda (soda ash) to maintain the pH between 8.0 and 9.0 prior to mixing mud.

- (3) An Alternative to Bentonite: Polymer or other substitute may only be allowed, when it will be proven as more efficient, less cost, effective and not hazardous to the quality of water and no plugging effects to the aquifer, and as approved by the PolWD PIU representative.

## 2.7 Working Hours

All work from start of drilling of the borehole until completion of well development shall be 16 hours per day except for the 72-hours continuous constant discharge rate pumping test.

## 3. GEOPHYSICAL LOGGING

### 3.1 Scope

The Contractor shall perform geophysical logging as specified in the Special Provisions.

### 3.2 Equipment

- (1) The geophysical logs may be recorded either by automatic recording on a chart strip or by manual reading of recorded values. In case the logs are recorded by the manual method, readings shall be taken per min. 0.33 m of borehole length.
- (2) The recorded logs shall be submitted to the PolWD PIU representative immediately upon completion of logging as plots of recorded characteristics versus depth for his approval. In case of disapproval by the PolWD PIU representative, the logs shall be repeated immediately.

### 3.3 Logs

Geophysical logging shall comprise the following logs:

Resistivity Log (8" and 18")

Self-potential log (SP)

Mud Viscosity Log

Penetration Rate

## 4. WELL CASING

### 4.1 Scope

The Contractor shall provide and install the well casing specified in the Contract Drawings and any temporary casing required during the work.

### 4.2 Casing Material

- (1) The Contractor shall, before commencement of the work, submit for the approval to the PolWD PIU representative the following details of all casing:

Type of material

Internal and external diameters

Wall thickness

Method of jointing

- (2) All permanent casing material shall be spiral welded steel pipe and of new stock.
- (3) The Contractor shall assume responsibility for any casing failure and shall correct, as approved by the PolWD PIU representative, any casing failure at no cost to the PolWD. In the event that the Contractor cannot correct a casing failure, the Contractor shall replace the casing with material complying with the specifications, or if necessary,



better casing as approved by the PolWD PIU representative at no extra cost to the PolWD.

- (4) The Contractor shall not be allowed to order casing materials prior the approval of the Final Well Design. All casing materials shall be delivered based from the Approved Final Well Design, no payment shall be made for excess length of casing material that is not in accordance with the final well design.

#### 4.3 Temporary Casing

The Contractor shall provide such temporary casing as may be necessary to prevent the collapse of any formation during the drilling operation to allow the well to be sunk to the specified depth and to allow the insertion of permanent lining material as required. The Contractor shall remove the temporary casing before completing the well, unless otherwise specified in these documents.

#### 4.4 Lining Installation

- (1) Lining materials shall be assembled and located in the well at the required depth in a continuous operation. The lining material shall be set concentric within the borehole by centralizing bars unless otherwise agreed with the PolWD PIU representative.
- (2) If the lining jams or is lost before it is set to the specified depth, the Contractor shall endeavor to remove the lining material from the well or, if unable to effect removal, shall re-drill the well and replace the lining material at his own expense.

#### 4.5 Lining Material Accessories

- (1) The Contractor shall provide as necessary the following accessories to set the lining materials to the required depth:
  - a. Centralizers to be affixed to the lining material at intervals of 20 meters to locate the lining material in the center of the drill hole;
  - b. Supporting clamps, equipment and tools;
  - c. Reducing cones and connecting pieces;
  - d. Casing hangers;
  - e. All other necessary equipment.
- (2) Except where expressly provided, all accessories shall be deemed to be included in the Bid Form for the provision and insertion of lining material.

#### 4.6 Testing for Plumbness and Alignment

- (1) Except where expressly provided, all accessories shall be deemed to be included in the Bid Form for the provision and insertion of lining material. All boreholes shall be constructed, plumb and true to line as defined herein. To demonstrate the compliance of his work with this requirement, the Contractor shall furnish all labor, tools and equipment and shall provide the detailed drawings and the description of the tests to the satisfaction of the PolWD PIU representative.
- (2) Tests for plumbness and alignment must be made after the complete construction of the well and before its acceptance. The Contractor, however, may make additional tests, during the performance of the work. No specific payments shall be made for making these tests.
- (3) Should the results of the test for plumbness and alignment show that the plumb bob of dummy fails to move freely throughout the length of the lining or

borehole to a depth of the lowest anticipated pump setting and should the well vary from the vertical in excess of two thirds of the smallest inside diameter of that part of the well being tested or beyond the limitations of this test, the plumbness and alignment of the well shall be corrected by the Contractor at his own expense. Should the Contractor fail to correct such faulty alignment or plumbness, the PolWD PIU representative may refuse to accept the well and the Contractor shall drill a new well without charge to the PolWD.

## 5. WELL SCREENS

### 5.1 Scope

The contractor shall provide and install the well screens specified in the Contract Drawings, unless otherwise specified in the Special Provisions.

### 5.2 Type of Screens

- (1) The type of screens shall be as specified in the tentative well design and the Special Provisions.
- (2) Slotted screens, if specified for installation, shall be so fabricated as to ensure the maximum yield of the well and to prevent clogging and encrustation and shall be free from jagged edges and irregularities that may accelerate clogging or corrosion.

### 5.3 Responsibility for Malfunction

- (1) The Contractor shall assume full responsibility for any malfunction of the screen caused by inadequate installation procedure and shall undertake any correction as approved by the PolWD PIU representative at no extra cost to the PolWD.
- (2) The screen must have no change of alignment at any of its joints after installation. If requested by the PolWD PIU representative, the Contractor shall submit for approval by the PolWD PIU representative the design and method of construction and installation of the screen.
- (3) In the event that the Contractor cannot correct a screen failure, the Contractor shall replace the screen with material complying with the specifications of this Contract at no extra cost to the PolWD.

### 5.4 Screen Strength

The screens shall have adequate strength to resist the external forces that may be applied during and after installation.

### 5.5 Screen Accessories

All fittings, packers, couplings, joints, plugs and seals used during installation of well screen together with the installation procedure, shall be to the approval of the PolWD PIU representative.

## 6. FORMATION STABILIZER/GRAVEL PACK

### 6.1 Scope

The Contractor shall provide and install formation stabilizer, or gravel pack as specified in the Contract Drawings and the Special Provisions.

### 6.2 Material

(1) The formation stabilizer/gravel pack material shall be #5 & #10 and shall consist of well-rounded, water worn siliceous grains. Angular chippings or road stone must under no circumstances be used as formation stabilizer/gravel pack material.

(2) The Contractor during the mobilization period shall submit to the PolWD PIU representative for his approval, samples of the formation stabilizer it proposes to use, stating the source of the formation stabilizer, quantities available, rate of delivery and any other information requested by the PolWD PIU representative.

### 6.3 Method of Installation

(1) The method of placing the formation stabilizer/gravel pack in the annulus shall be such that separation of the gravel and bridging is avoided.

(2) The formation/stabilizer/gravel pack shall immediately upon completion of lining installation, be placed in the annulus between the borehole and the lining, in the screened section(s) of the lining, as specified in the final well design.

(3) Since the borehole will be drilled by the rotary method, installation of formation stabilizer/gravel pack shall be done by circulation of the drilling mud.

## 7. WELL DEVELOPMENT

### 7.1 Scope

(1) The Contractor shall furnish compressors, surge plungers, jetting tools, electric generators, chemicals and any other equipment required for satisfactory well development and shall undertake the development as directed by the PolWD PIU representative.

(2) Development shall, since the rotary drilling method is applied, comprise deflocculation, high velocity jetting in continuous slot screens, surging with plunger in slotted screens, unless otherwise, specified in the Special Provisions.

### 7.2 Expected Yield

The Contractor shall develop the well to its maximum expected yield, as specified in the Special Provisions.

### 7.3 Surging with Plunger

(1) Upon completion of installation of lining or formation stabilizer/gravel pack, the Contractor shall develop the well by mechanical surging with a valve-type surge plunger approved by the PolWD PIU representative.

(2) Before start of surging and with one-hour intervals during the surging operation, the depth to the well bottom and to the top of gravel pack shall be recorded.

(3) Surging shall be continued until accumulation of sediments in the sump pipe, during a one-hour period surging operation, is negligible.

#### 7.4 Deflocculation

- (1) Upon completion of installation of lining or formation stabilizer/gravel pack, the drilling mud shall immediately be displaced from the well by pumping clean water into the sump pipe.
- (2) Mud displacement shall immediately be followed by injection and/or jetting through the screened sections with polyphosphate solution to deflocculate the mud cake on the borehole wall. The concentration of the polyphosphate solution shall be 3.0 percent by weight of the quantity of water in the borehole. The well shall then be left for 12-24 hours before developing is continued, to allow the polyphosphate to react; however, if the drilling mud viscosity during drilling had been or had exceeded 40, the percentage of the polyphosphate solution shall be increased proportionately with the increase of viscosity.

#### 7.5 High Velocity Jetting

- (1) After the deflocculation material has been allowed to work for 12-24 hours, all sections screened with continuous slot screens shall be developed by high velocity jetting.
- (2) The jetting tool shall be equipped with two or four nozzles. The nozzle design shall be such that it produces a concentrated jetting action. The tool shall be presented to the PolWD PIU representative for approval before the start of drilling operation.
- (3) The jetting tool shall also be equipped with a circular brush or any approved equivalent to facilitate cleaning. The jetting tool with equipped brush shall be presented to the PolWD PIU representative for approval before the start of drilling operation.
- (4) The jetting tool shall be supplied with water through a high-pressure pump capable of producing a nozzle velocity appropriate to develop a well in order to maximize well yield. The pump shall be equipped with suitable pressure gauge on the discharge side to facilitate monitoring of nozzle velocity.
- (5) The development shall be carried out by slowly rotating the jetting tool and gradually lowering it in order to cover the entire surface of the screen.
- (6) At the same time as the high velocity jetting is performed, the well shall be discharged with a discharge rate slightly higher than the discharge rate from the jetting tool.
- (7) Each section of the screen shall be jetted until the return water is free from drilling mud, but no section shall be jetted less than 15 minutes per meter of screen.

#### 7.6 Well Cleaning

Upon completion of the development operations, the Contractor shall demonstrate to the satisfaction of the PolWD PIU representative that the bottom of the well is clear of all sand, mud and other foreign materials.

#### 7.7 Freedom from Sand

- (1) The Contractor shall develop the well by the methods specified until the water pumped from the well is substantially free from sand and until the turbidity is less than 5 on the Silica Scale described in the Standard Methods of Water Analysis (latest edition as published by AWWA, APHA and WPCT).
- (2) The water pumped from the well shall not contain an amount of fine material in excess of 1.0 mg per liter when the well is pumped at its maximum expected yield. The Contractor shall furnish the equipment for measurement of the sand content.

## 7.8 Acceptance of Development

- (1) The development by the specified methods shall be repeated and continued until the well is thoroughly developed in accordance with the criteria specified.
- (2) If the well yield after the well has been confirmed sand-free is still below the yield, which is considered acceptable for the penetrated aquifer, then the PolWD PIU representative may instruct the Contractor to perform further development.

## 8. WELL TESTING

### 8.1 Scope

The Contractor shall provide all personnel and labor, instrumentation and water level indicators and operate a Pumping Unit for the following purposes:

- (a) Well Flushing for a duration of two (2) hours prior to the Step-drawdown pumping tests (SDT). After the flushing, the well shall be allowed to recover prior to performing SDT, wherein the well's water level shall reach the static water level measured prior to flushing or as directed by the PolWD PIU representative.
- (b) Step-drawdown pumping tests on the completed well in accordance with the standard methods or as directed by the PolWD PIU representative.
- (c) Constant discharge pumping test on the completed well in accordance with the standard methods or as directed by the PolWD PIU representative.

### 8.2 Equipment Capacity

- (1) The Contractor shall provide and operate pumping machinery capable of carrying out the specified pumping and shall provide adequate controls to allow discharge rates to be kept constant at varying pumping water levels and to permit pumping with a variation of not more than 5% of the designated discharge rate during any period of yield or aquifer testing.
- (2) The Pumping Unit set should be able to deliver a maximum discharge rate of 950 gallons per minute (60.0 lps) at maximum pump setting of 75 meters. Reduction of cost or variation order maybe allowed if maximum well discharge is not reached even at a pump setting of 75 meters and if break suction does not occur.

On the other hand, reduction of cost or variation order shall not be allowed if any of the following conditions occur: (1) maximum well discharge reached at a pump setting lower than 75 meters, (2) maximum well discharge is not reached due to equipment breakdown or pumping test assembly is not capable of delivering the required maximum discharge rate at the corresponding maximum pump setting.

- (3) Suitable pumping machinery will be deemed to be:
  - a. Submersible electric pump unit together with generator and such accessories needed to run the pump.
  - b. Lineshaft pump and internal combustion prime mover together with all accessories needed to run the pump.
  - c. The compressor unit to be used in this contract shall be able to deliver a minimum of 689cfm (cu.ft/min) and a minimum rated operating pressure of 240 psi (pounds/sq.in).

### 8.3 Equipment Operation

- (1) The Contractor shall supply and operate all equipment and accessories necessary for installation and removal of pumps.

- (2) The Contractor shall provide a generator set which operates at a noise level not louder than 85 decibels (dB). In the instance that the existing equipment of the Contractor emits noise more than 85 dB, the Contractor shall provide positive noise abatement devices to tone down the noise level of the generator set to the acceptable limit.
- (3) The Contractor shall maintain on site sufficient fuels, lubricants, spares and other accessories needed to run the Pumping Unit for whatever period may be specified by the PolWD PIU representative.
- (4) The Contractor shall provide sufficient competent personnel including a qualified fitter and electrician, as may be necessary to install and operate the Pumping Unit.

#### 8.4 Control of Discharge Rate

The Contractor shall, during the pumping tests, provide a suitable gate valve on the discharge pipeline to facilitate easy control of the discharge rate.

#### 8.5 Water Level Sounding Pipe

- (1) The Contractor shall provide and install a temporary tube of at least one (1) inch diameter from the top of the well to 2 m above the pump bowl assembly to facilitate easy measurements of water level. The tube shall be open only at the bottom and top.
- (2) Payment for providing, installing and removing the tube shall be deemed to be included in the rates given for pumping tests.

#### 8.6 Discharge Rate Monitoring

Discharge rates shall be measured and recorded with a water meter. All items are subject to the PolWD PIU representative's approval before start of drilling.

#### 8.7 Definition of "Pumping Unit"

The equipment specified in Clause 8.2 - 8.6 is referred to as the Pumping Unit.

#### 8.8 Pumping Procedure

The PolWD PIU representative will determine the pumping procedure necessary to obtain the objectives of this Contract.

#### 8.9 Suspension of Pumping

If the PolWD PIU representative considers that the absence or condition of any equipment, personnel, fuel, lubricants or accessories will prejudice the quality of data obtained from any pumping test, he may suspend the work in accordance with the provisions of the conditions of Contract.

#### 8.10 Equipment Breakdown during Pumping

- (1) The pumping must be continuous and at a constant rate during the pumping tests. The PolWD PIU representative will instruct the Contractor as to the expected maximum duration of each pumping test before start of each test.
- (2) If pumping is interrupted or the discharge rate fluctuates by more than 5% of the designated discharge rate, the test may be repeated after a period of recovery determined by the PolWD PIU representative.
- (3) If any pumping test is interrupted because of equipment breakdown or inadequate supervision or discharge control without any reasonable cause and at the failure of

the contractor, no payment shall be made for any pumping period less than the minimum of 72 hours. The Contractor has to recommence the pumping test at a minimum of 24 hours provided that the maximum discharge rate of 950 gallons per minute (60.0 lps) will be reached, otherwise, the pumping test shall continue until the required maximum discharge will be attained.

- (4) In such case that the pumping test is interrupted due to dry pumping or at any valid and justifiable cause, whichever claims are subject for evaluation. Payment shall be made based on the actual period of the pump test prior the interruption.

#### 8.11 Duration of Tests

- (1) The step drawdown pumping tests shall be performed on 5 steps with duration of 1 hour each.
- (2) The constant discharge pumping tests shall be performed for a period of three (3) days, unless otherwise specified in the Special Provisions or unless otherwise instructed by the PolWD PIU representative.

#### 8.12 Temporary Pipeline

- (1) The Contractor shall provide a temporary pipeline as directed by the PolWD PIU representative for the discharge from pumping tests and for clearance to a suitable watercourse or drain.
- (2) Under certain circumstances when re-infiltration cannot be avoided or it is costly to provide for this condition, the PolWD PIU representative shall decide to what distance from the well water may be discharged on the ground.

### 9. CEMENT GROUTING

#### 9.1 Scope

The Contractor shall, unless otherwise specified in the Special Provisions, provide the cement and mixing equipment required for the mixing of the grouting indicated in the Preliminary Well Design and shall place the cement grout as specified.

#### 9.2 Grouting Material

- (1) Cement grout shall consist of a mixture of 95% Portland Cement, 5% Bentonite, sand and clean water, mixed in the proportion of 52.5 kg. of Portland Cement/Bentonite to maximum of 30 liters of water.
- (2) All cement shall, unless otherwise specified in the Contract Documents, conform to the "Specifications for Portland Cement" (ASTM C150 latest revision).

#### 9.3 Method of Placing Grout Material

- (1) The method and equipment for placing the grout from the bottom of the casing/hole/annulus to be grouted, to the surface shall be to the approval of the PolWD PIU representative. Flushing of the annular space with fluid to assure the space is open and to remove loose material will be required by the Contractor before grouting is commenced.
- (2) Any grouting operation shall be continuous and before starting, sufficient grout shall be mixed to complete the whole operation. During the grouting operation, the mixed grout shall be continuously stirred. The Contractor shall provide such tanks, hoppers and other equipment as may be necessary to meet these requirements.

#### 9.4 Setting Time

No work will be allowed on the well within a period after completion of grouting unless quick setting cement is used. In such case, the idle period may be reduced subject to the PolWD PIU representative's prior approval.

### 10. WELL COMPLETION

#### 10.1 Scope

The Contractor shall provide and operate all equipment necessary to restore the site as near as possible to its condition before commencement of drilling and shall furnish and install a well head cap as specified in the Contract Drawings.

#### 10.2 Site Restoration

The site shall be restored to a condition as nearly possible to that, which existed before the well drilling and testing activities commenced. This work shall include, but not limited to, restoration of fences and structures, removal of drill cuttings, leveling of the disturbed ground surfaces and replacement or compensation for the destroyed plants and landscaping. The site shall also be cleared from all debris, excavated materials, temporary facilities and other related obstructions, or as directed by the PolWD's PolWD PIU representative.

In such a case when the drilling is completed and concluded that no water could be extracted from the site, the Contractor shall restore the area to its original condition at no additional cost to the PolWD.

#### 10.3 Final Well Inspection

After each material has been installed in place, an inspection shall be conducted in the presence of the PolWD. A well camcording will be performed in the well to ensure the integrity of the installed blank casing and well screens. Any discrepancy found during the inspection that entails cost will be subject to imposition of corresponding payment reduction.

#### 10.4 Well Head Capping

The well head shall be completed with a well head assembly fully welded to the upper casing as well as a water level sounding tube with screw cap in order to prevent any unauthorized tampering of the well.

### 11. SUBMITTAL OF REPORTS AND BOREHOLE DATA

(1) The Contractor shall submit to the PolWD PIU representative daily records in duplicate containing the following information:

- a. Site
- b. Date
- c. Description of each stratum encountered
- d. Depth below ground of each change of stratum
- e. Depths and details of all disturbed samples

(2) The Contractor will be required to keep a record of penetration rate, mud losses and mud conditions.

(3) At the end of the well construction and before final payment is made, the Contractor shall submit to the PolWD PIU representative a report containing the following information:



- a. Total depth of the well
  - b. Description of the strata encountered
  - c. The sizes and the lengths/specifications of the casing installed
  - d. The date of the start and the completion of the well construction
  - e. The locations and the description of the casing perforations or the well screen placement
  - f. The locations of the gravel, the size of gravel, if applicable, and the amount of cement grout installed
  - g. Records of discharge rates and drawdown during well development together with description of the methods of development
  - h. The well yield (expressed as discharge rate and drawdown), the dates and the duration of the test(s)
  - i. The methods of measuring the discharge rate and the drawdown
- (4) The cost of records shall be deemed to be included in the contract rates.

## 12. SPECIAL PROVISIONS

### 12.1 GENERAL

#### 1. Water Level Sounding

The Contractor shall provide a functioning and accurate water sounding instrument acceptable to the PolWD PIU representative to measure the water level during the drilling, development and testing of the well.

#### 2. Hydrogeologist Requirement

The Contractor shall employ a technically Hydrogeologist with experience in well drilling. The Hydrogeologist shall provide professional support services to the Contractor in the well drilling process, from geophysical logging to well testing, thereby ensuring the proper execution of the corresponding procedures. The Hydrogeologist shall conduct a thorough analysis of the data obtained from the geophysical logging and provide a comprehensive interpretation. The Hydrogeologist shall also prepare and submit thru the Contractor the documentary requirements stipulated in sub-item 12.4 Geophysical Logging.

### 12.2 MOBILIZATION AND DEMOBILIZATION

- (1) The Contractor shall mobilized, and bring out into work, all personnel plant and equipment, in accordance with his approved Construction Program, Equipment Utilization Schedule and Manpower Schedule, from its regular place of business or another project to the site to undertake the Contract.
- (2) Mobilization shall include the obtaining and transporting to jobsite of pipes, materials, equipment, personnel, constructional plant and all necessary items for the execution and completion of the work and shall also include the setting up and the verification of all equipment, instrument and all other plant until it is rendered operable. It shall include sufficient supply of spare parts for the pipe laying works. Breakdowns are to be repaired on site by the most expeditious method possible at no cost to PolWD. In the event repairs being beyond the personnel or tools at the site to effect repairs in a reasonable time, such that it has to be removed from the site, then a replacement of machine or equipment of a similar capacity shall be provided by the Contractor at no additional mobilization costs to PolWD nor extension of completion of works.

- (3) Demobilization shall include dismantlement and removal from the site of the Contractor's plant, materials and equipment and all temporary facilities. Demobilization shall include clean-up of the site after completion of the Contract Work as approved by the PolWD PIU representative and transportation from the site of Contractor's employees.

### 12.3 WELL DRILLING

#### 1. Equipment

The Contractor shall provide and operate one (1) mud rotary drilling rig including all auxiliary equipment necessary to complete the work within the contract period.

#### 2. Drilling Method

The drilling shall be performed with the mud rotary method.

### 12.4 GEOPHYSICAL LOGGING

#### 1. Scope

The work includes geophysical logging. Geophysical logging shall be done from ground surface down to 150 meters depth. A Narrative Report on the Interpretation of Geophysical Logging Results and the recommended final well design shall be submitted to the Procuring Entity with the sign and seal of the Hydrogeologist.

In addition, the electronic file of the geophysical well logging results (Resistivity Log, Spontaneous Potential Log/Self-Potential Log (SP), Mud Viscosity Log and Penetration Rate) including the raw data shall be submitted to the Polomolok Water District together with the narrative report and recommended final well design.

### 12.5 WELL CASING

#### 1. Casing Material

All permanent casings to be installed shall be:

- a. 300 mmØ spiral welded steel casing with minimum thickness of 6mm as shown in the preliminary well design and should be of new stock.

### 12.6 WELL SCREEN

#### 1. Type of Screen

The screens shall be stainless steel continuous slot wedge wire wound with slot size of 1.5 mm (slot 60), 3 meters length per piece and of new stock. The screen specifications shall be subject to evaluation as to the quality, efficiency and must be cost effective. Photocopies of receipts of purchase

### 12.7 WELL DEVELOPMENT

#### 1. Scope

Well development for each production well shall consists of deflocculating, surging with plunger and bailing, water jetting and airlifting.

## 2. Expected Yield

The production well is expected to yield at 950 gallons per minute (60.0 liters per second).

## 12.8 WELL TESTING

No special Provisions

## 12.9 CEMENT GROUTING

No special Provisions

## 12.10 TEMPORARY SITE FACILITIES

### 1. Contractor's Office

During the performance of the Contract, the Contractor shall maintain a field office at the site of the work at which he or his authorized agent shall be present at all times while the work is in progress. Instructions from the PolWD or his authorized Representative left at his field office shall be considered as having been delivered to the Contractor. One copy of the Contract Documents including the drawings and specifications for the work shall be kept at all times in the said office, ready for instant reference.

The Contractor at his option may provide alternative Field Engineers Office of any type other than specified herein, subject to the approval of the PolWD's PolWD PIU representative.

### 2. TEMPORARY CONNECTIONS DURING CONTRACT PERIOD (Water and Power)

**Water Supply** – For all operations required in the execution of the Contract, the Contractor shall be responsible for providing ample water supply under a pressure sufficient for all construction purposes. The PolWD shall furnish reasonable quantities of water when available subject to corresponding fees' schedule of the district.

**Power and Lighting** – The Contractor shall make all necessary applications and arrangements and pay all fees and charges for all temporary wirings, switches, connections, meters and monthly bills for power and light necessary for the proper completion of this Contract. There shall be sufficient electric lighting so that all works may be done in a workmanlike manner when there is no sufficient daylight or during night work.

## 12.11 LOGBOOK

A logbook shall be maintained on-site at all times reflecting time extensions, work suspensions, change/extra work orders and circumstances, affecting the progress of work, to be signed by both the PolWD PolWD PIU representative and the Contractor.

## 12.12 CONSTRUCTION CPM

The CPM network shall be the basis of the contractor in completing the project in the prescribed period of time.

The CPM shall be updated by the Contractor when required by the PolWD PIU representative but not more than once per month.

## 12.13 PROJECT SIGNS

The Contractor shall furnish, erect and maintain a minimum of one (1) project sign and one (1) COA Sign Board (8 ft. x 8 ft.) in accordance with the Standard Drawings. The location for the erection of these signs by the Contractor shall be as directed by the PolWD PIU representative.

## 12.14 WORKMEN'S IDENTIFICATION BADGES AND SAFETY GEARS

The Contractor shall provide all his men working in the project with proper identification badges and safety gears.

## 12.14 CONSTRUCTION SAFETY

### a. Construction Safety and Health Committee

#### 1. Composition:

1.1 Construction-in-Charge or his representative as chairperson ex-officio

1.2 Construction Safety and Health Officers

1.3 Safety Representative/Officer

1.5 Doctors, nurses and other health personnel pursuant to the requirements stated in Rule 1042 of the Occupational Safety and Health Services (OSHS)

1.6 Workers Representative

#### 2. Duties and Responsibilities:

2.1 The Construction-in-Charge or his representative shall act as the Chairperson of the committee.

2.2 The committee shall conduct safety meetings at least once a month.

2.3 The persons constituting the Safety and Health Committee shall, as far as practicable, be at the construction site whenever construction work is being undertaken.

2.4 The committee shall continually plan and develop accident prevention programs.

2.5 The committee shall review reports of inspection, accident investigation and monitor implementation of the safety program.

2.6 The committee shall provide necessary assistance to government authorities authorized to conduct inspection in the proper conduct of their activities.

2.7 The committee shall initiate and supervise safety trainings for its employees.

2.8 The committee shall conduct safety inspection at least once a month and shall conduct investigation of work accidents and shall submit a regular report to DOLE.

2.9 The committee shall initiate and supervise the conduct of daily brief safety meetings or toolbox meetings.

2.10 The committee shall prepare and submit to DOLE, reports on said committee meetings.

2.11 The committee shall develop a disaster contingency plan and organize such emergency service units as may be necessary to handle disaster situations.

### b. General Safety within Construction Premises

1. The provision for personal protective equipment, danger signs, barricades, and safety instructions for workers, employees, public, and visitors, such as, housekeeping, walkway surfaces, means of access, i.e. stairs, ramps, floor openings, elevated walkways, runways, platforms and light.

#### 2. Personal Protective Equipment

2.1 The Contractor shall provide adequate and approved type of protective equipment (hard hats, safety glasses with side-shields, rubber boots). Workers

within the construction project site shall be required to wear the necessary Personal Protective Equipment (PPE) at all times

2.2 Construction workers who are working from unguarded surfaced six (6) meters or more above grade, temporary or permanent floor platform, scaffold or where they are exposed to the possibility of falls hazardous to life or limb, must be provided with safety harnesses and life lines.

2.3 Specialty construction workers must be provided with special equipment, such as specialized goggles or respirators for welders and painters or paint applicators, and workers who worked in confined and enclosed spaces.

2.4 All other persons who are either authorized or allowed to be at the construction site shall wear appropriate PPE.

### 3. Safety Personnel:

3.1 The Contractor shall provide for a full-time officer, who shall be assigned as the construction safety and health officer to oversee full time the overall management of the Construction Safety and Health Program.

3.2 The construction safety and health officer shall frequently monitor and inspect any health and safety aspect of the construction work being undertaken. He shall also assist government inspectors in the conduct of safety and health inspection at any time whenever work is being performed or during the conduct of accident investigation.

### 4. Emergency Occupational Health Personnel and Facilities

4.1 The Contractor shall provide an emergency health officer within the worksite duly complemented by adequate medical supplies, equipment and facilities. The services of a full-time registered nurse shall be required when the total number of workers exceeds 50 but not more than 200.

4.2 Where the Contractor provides only a treatment room, he shall provide for his workers in case of emergency, access to the nearest medical clinic or to a medical clinic located within 5-kilometer radius from the workplace and can be reached in 25 minutes of travel. Such access shall include the necessary transportation facilities. In such situation, there shall be a written contract with the medical clinic to attend to such workplace emergencies.

a. The engagement of an Emergency Health Provider for the construction project site shall be considered as having complied with the requirement of accessibility to the nearest hospital facilities.

b. The Contractor shall always have in the construction site the required minimum inventory of medicines, supplies and equipment.

### 5. Construction Safety Signage(s) and Barricades

5.1 Construction Safety Signage(s) shall be provided as a precaution and advisory to workers and the general public of the hazards existing in the worksite.

5.2 Signage Procedure – the signage shall be:

- a. Posted in prominent positions and at strategic locations.
- b. As far as practicable, be in the language understandable to most of the workers employed in the site.
- c. For non-raised floor areas, the attached yellow CAUTION sign shall be used when using yellow CAUTION tape.
- d. For non-raised floor areas, the attached red DANGER sign shall be used when using the red DANGER tape.
- e. Placed in designated areas at 1.2 meters from ground level, if there is no other more practicable height for placement.
- f. Regularly inspected and maintained in good condition to achieve its purpose.
- g. Signage that are damaged, illegible, those no longer apply as to purpose, site or language, shall be removed or be replaced by the safety officer when needed.
- h. Removed after the hazard is completely eliminated. If upon work completion the hazard is still present, the signage shall remain in place.
- i. Designed and constructed following the Overall Dimensions of Safety Signs Formula as required by the Occupational Safety and Health Services (OSHS).
- j. Specific with the type of hazard and should indicate the name of the contaminant/substance involved (for chemical hazards), and the type of PPE or respiratory equipment to be worn.

5.3 Posting of Signage shall include, but not limited to the following places:

- a. Areas where there are risks of falling objects.
- b. Areas where there are risks of falling, slipping, tripping among workers and the public.
- c. Prior to entry in project sites, locations and its perimeter.
- d. Where there is mandatory requirement on the usage of PPEs.
- e. Areas where explosives and flammable substances are used or stored.
- f. Approaches to working areas where danger from toxic or irritant airborne contaminants/substances may exist.
- g. All places where contact with or proximity to electrical facility/equipment can cause danger.
- h. All places where workers may come in contact with dangerous parts of machinery or equipment.
- i. Locations of fire alarms and fire-fighting equipment.
- j. Locations for instructions on the proper usage of specific construction equipment, tools.

5.4 Barricading Procedures – the following shall apply:

- a. The contractor shall provide all necessary barricades, safety tapes, safety cones or safety lines as required in isolating or protecting an unsafe work area from other workers, pedestrians or vehicular traffic.

- b. Barricades shall completely enclose the hazardous area and effectively limit unintentional or casual entry.
- c. Barricades shall be three (3) feet vertical height from the ground, when no other more practical height specification is available.
- d. Barricades shall be maintained in good condition to achieve its purpose.
- e. Barricades that are damaged, faded or that no longer apply as to purpose, site or meaning, shall be removed or shall be replaced by the safety officer.
- f. Barricade tape shall not be used on the floor as this presents a slipping hazard of its own.
- g. In addition to using the proper warning tape, the contractor shall use the appropriate safety signage when barricading an area.
- h. All barricades shall be removed after the hazard is completely eliminated.
- i. Upon work completion, if the hazard is still present, the barricade shall remain in place.

5.5 Installation of barricades shall include, but not limited to the following worksites conditions:

- a. hazardous areas
- b. trip hazard
- c. robotic movement
- d. energized electrical works
- e. overhead suspended load test
- f. critical high-pressure test
- g. chemical introduction
- h. all exposure
- i. emergency response zone unsafe condition zone
- j. danger zone
- k. confined and enclosed space

#### 5.6 Safety on Construction Heavy Equipment

In relation to heavy equipment operation in all construction sites, the following are required in the different phases of the project.

##### a. Pre-Construction

The Contractor must ensure that appropriate certification is obtained from DOLE duly accredited organizations for the following:

1. All heavy equipment operators assigned at the project site must be tested and certified in accordance with a standard test prescribed by Technical Education and Skills Development Authority (TESDA) in coordination with its accredited organizations.
2. All heavy equipment must be tested and certified in accordance with the standards prepared by DOLE or its recognized organizations prior to commissioning of said equipment.

b. During Construction to Post Construction

The Contractor must ensure that the following conditions are met or complied with:

1. Load restriction of trailers carrying such heavy equipment, the height and width clearances as imposed by the DPWH shall be observed.
2. Only duly certified operators are allowed to operate their designated heavy equipment and must wear personal protective equipment.

6. Safety and Health Safety and Health Information

6.1 Workers shall be adequately and suitably:

- a. Informed of potential safety and health hazards to which they may be exposed at their workplace.
- b. Instructed and trained on the measures available for the prevention, control and protection against those hazards.

6.2 Every worker shall receive instruction and training regarding general safety and health common to construction sites which shall include, but not limited to the following:

- a. The basic rights and duties of the workers at the construction site.
- b. The means of access and egress, both during normal work and in emergency situations.
- c. The measures for good housekeeping.
- d. The location and proper use of welfare and first-aid facilities.
- e. The proper care and use of the items or personal protective equipment and protective clothing provided the workers.
- f. The general measures for personal hygiene and health protection.
- g. The fire precautions to be taken.
- h. The action to be taken in case of any emergency.
- i. The requirements of relevant health and safety rules and regulations.

6.3 The instruction, training and information materials provided shall be given in a language or dialect understood by the worker.

- a. Written, oral, visual and participative approaches shall be used to ensure that the worker has understood and assimilated the information.
- b. Each supervisor or any person e.g. Foreman, lead man, and other similar personnel shall conduct daily tool box or similar meetings prior to the start of the operations for the day to discuss with the workers and to anticipate safety and health problems related.
- c. No person shall be deployed in a construction site unless he has undergone a safety and health awareness seminar conducted by safety professionals or accredited organizations or other institutions recognized by DOLE.



## 7. Construction Safety and Health Reports

### 7.1 The Construction Safety and Health Report shall include:

- a. Monthly summary of all safety and health committee meetings
- b. Summary of all accident investigations /reports
- c. Corrective/Preventive measures/action for each hazard
- d. Periodic hazards assessment with corresponding remedial measures for new hazards
- e. Safety promotions and trainings conducted/attended

### 7.2 Submission of Reports:

- a. The Contractor shall be required to submit a monthly construction safety and health report to the Bureau of Working Conditions (BWC) copy furnished the DOLE Regional Office concerned.
- b. In case of any dangerous occurrence or major accident resulting in death or permanent total disability, the concerned Contractor shall notify the appropriate DOLE Regional Office within twenty-four (24) hours from occurrence.
- c. After the conduct of investigation by the concerned construction safety and health officer, the Contractor shall report all disabling injuries to the DOLE Regional Office on or before the 20th of the month following the date of occurrence of accident using the prescribed forms of the DOLE/BWC.

## 8. Workers' Welfare Facilities

### 8.1 Adequate supply of safe drinking water:

- a. If the water is used in common drinking areas, it shall be stored in closed containers from which the water is dispensed through taps or cocks. Such containers shall be cleaned and disinfected at regular intervals but not exceeding fifteen (15) days.
- b. Notices shall be posted conspicuously in locations where there is water supply that is not for drinking purposes.

### 8.2 Adequate supply of safe drinking water:

- a. Adequate facilities for changing, storing and drying of work clothes.
- b. Adequate accommodation for taking meals and shelter.
- c. Separate sanitary, washing and sleeping facilities for men and women workers.

### 8.3 Violations and Penalties

- a. Pursuant to the provisions of D.O. 13 and as circumstances may warrant, the DOLE shall refer to the Philippine Contractors Accreditation Board (PCAB) its findings, after due process, on any act or omission committed by construction contractors in violation of this rule, labor standards, safety rules and regulations and other pertinent policies. Any such violation committed by construction contractors, whether general contractors or sub-contractors,

shall constitute as prima facie case of a construction mal-performance of grave consequence due to negligence, incompetence or malpractice contemplated under RA 4566 (Constructors' Licensing Law), as amended, and its Implementing Rules and Regulations.

- b. In cases of imminent danger situations, the DOLE Regional Director shall issue a stoppage order pursuant to the provisions of Rule 1012.02 of the Occupational Safety and Health Services (OSHS) and other pertinent issuances for stoppage of operation or for other appropriate action to abate danger.
- c. Pending the issuance of the order, the Contractor shall take appropriate measures to protect his workers.
- d. The stoppage order shall remain in effect until the danger is removed or corrected permanently.
- e. Non-compliance with the order shall be penalized under existing provisions of labor laws.
- f. All processes and/or procedures in the conduct of General Labor Standard's inspection including General Occupational Safety and Health/Technical Safety Inspection shall be governed by the provisions.

#### 12.16 WORKING/CALENDAR DAYS

The term "Working Day" refers to working days in the government service. The term "Calendar Day" refers to the days in a week, including Saturdays, Sundays and holidays. Whenever the word "day" is used, it shall refer to calendar day.

#### 12.17 INSPECTION OF THE WORK SITE

Contractor shall inspect the site of the work by personal examination of the location of the proposed work and the actual visualization of the work to be done. He should be aware of the conditions which might affect the execution of this contract and has made provisions in his bid.

### 13. MATERIALS AND WORKMANSHIP

#### 13.1 SAFEGUARDING OF EQUIPMENT, MATERIALS AND WORK

The Contractor shall properly safeguard all equipment, materials and work against loss, damages, malicious mischief, or tampering by unauthorized persons until acceptance of the work by the PolWD. Locked and covered storage or continuous surveillance by a watchman shall be provided if required to accomplish this purpose.

#### 13.2 NEW MATERIALS AND EQUIPMENT

Unless otherwise specifically shown, or permitted by the PolWD PIU representative, all materials and equipment incorporated in the work shall be new and of current manufacture. The PolWD PIU representative may request the Contractor to furnish manufacturer's certificate to this effect.

### 13.3 TITLE TO MATERIALS FOUND ON THE WORK

The PolWD reserves the right to retain title to all materials developed and obtained from the operations connected with the work. Unless otherwise specified in the Special Provisions, neither the Contractor shall have any right, title, or interest in or to any such materials. The Contractor will be permitted to use in his work, without charge, any such materials that meet the requirements of the Specifications and Drawings.

### 13.4 DEFECTIVE EQUIPMENT, MATERIALS OR WORK

- a. Inspection of the work shall not relieve the Contractor of any of his obligations under the Contract. Even though the equipment, materials, or work required to be provided under the Contract have been inspected, accepted, and estimated for payment, the Contractor shall, at his own expense, replace or repair any such equipment, materials, or work found to be defective or otherwise not to comply with the requirements of the Contract up to the end of the maintenance and guarantee period.
- b. Any equipment or materials brought upon the job site by the Contractor and subsequently rejected by the PolWD PIU representative as not complying with the requirements of the Contract shall be removed immediately by the Contractor to a satisfactory distance from the job site.
- c. If the Contractor shall fail to repair or replace unsatisfactory equipment or materials from the job site within seven (7) calendar days after being ordered to do so by the PolWD PIU representative, the PolWD PIU representative, acting on behalf of the PolWD, may make the ordered repairs or remove the condemned equipment or materials; and the PolWD shall deduct the cost thereof from any moneys due or to become due the Contractor.

### 13.5 RUBBISH CONTROL

During the progress of the work, the Contractor shall keep the site of the work and other areas used by him in a neat and clean condition, and free from any accumulation of rubbish.

### 13.6 DUST CONTROL

The Contractor shall at all times conduct his work so as to avoid unnecessary dust. He shall provide adequate equipment and water as determined by the PolWD PIU representative to be necessary for accomplishment of this objective.

### 13.6 CLEANING UP

The Contractor shall promptly remove from the vicinity of the completed work all rubbish, unused materials, concrete forms, equipment, and temporary structures used during construction.

### 13.8 CHARACTER OF WORKMEN

Only qualified personnel and skilled workmen shall be employed on the site except in positions normally occupied by unskilled labor. When required in writing by the PolWD PIU

representative, the Contractor shall discharge any person who is, in the opinion of the PolWD PIU representative, incompetent, disorderly or otherwise unsatisfactory and shall not again employ such discharged person on the work except with the written consent of the PolWD PIU representative. Such discharged person shall not be the basis of any claim for damages against the PolWD or any of his agents. If the Contractor permits such a person on the work site without the consent of the PolWD PIU representative, this alone shall be sufficient to immediately suspend the Contract until the PolWD PIU representative's instructions have been fulfilled.

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

### **1. INTENT OF SPECIFICATIONS AND DRAWINGS**

- a.** The intent of the Specifications and Drawings is that the Contractor shall furnish all the required plant, labor, materials, equipment and services, unless otherwise specifically provided.
- b.** The Specifications and Drawings are complementary and what is called for in one shall be as binding as if called for in both.
- c.** Any discrepancies, errors, or omissions found in the Specifications or Drawings shall be reported in writing within ten (10) days from discovery to the Project Engineer who will issue the correction in writing within the same period. The Contractor shall not take advantage of any such discrepancies, errors, or omissions, but shall comply with any corrective measures regarding the same prescribed by the Project Engineer.
- d.** In case of conflict among the specifications, drawings, general conditions, special conditions, special provisions, the matter shall be resolved by the PolWD through the Project Engineer.

### **2. SHOP DRAWINGS**

- a.** Whenever called for in these Specifications or on the Drawings, or when required by the Project Engineer, the Contractor shall furnish the PolWD for review three (3) prints of each shop drawing. The term “shop drawing” as used herein shall be understood to include detail design calculations, fabrications and installation drawings, lists, graphs, operating instructions, etc. Shop drawings shall be submitted to the PolWD for review/approval within fifteen (15) days from receipt of the Notice of Award, unless otherwise extended in writing by the PolWD.
- b.** All shop drawing submittals shall be accompanied by a transmittal form using the format bound with the Contract Documents, if one is included. Any shop drawing submittal not accompanied by such a form, or where all applicable items on the form are not completed, will be returned for re-submittal. The Contractor may authorize a materials or equipment supplier to deal directly with the PolWD with regard to shop drawings, however, ultimate responsibility for the accuracy and completeness of the information contained in the submittal shall remain with the Contractor.
- c.** A separate transmittal form shall be used for each specific item or class of material or equipment for which a submittal is required. Transmittal of shop drawings on various items using a single transmittal form will be permitted only when items taken together constitute a manufacturer’s “package” or are so functionally related that expediency indicates review of the group or package as a whole. At his option, the Contractor or Supplier may obtain from the PolWD quantities of the shop drawing transmittal form at reproduction cost.
- d.** Within five (5) calendar days after receipt of said prints, the PolWD will return prints of each drawing to the Contractor with his comments noted thereon. Whenever a re submittal is required, the Contractor shall make a complete and acceptable submittal to the PolWD within ten (10) days from receipt of the

returned shop drawings. Non-compliance hereof will give rise to the PolWD's right to either

- (a) cancel the award; or
  - (b) Withhold the money due the Contractor to cover additional costs of the Project Engineer's review beyond the second submission. Such failure may be considered a factor against the Contractor's competence in future biddings to be conducted by the PolWD.
- 
- e. If three (3) prints of the drawings are returned to the Contractor marked "NO EXCEPTIONS TAKEN", formal revision of said drawings will not be required.
  - f. If three (3) prints of the drawings are returned to the Contractor marked "MAKE CORRECTIONS NOTED", formal revision of said drawings will not be required.
  - g. If one (1) print of the drawings is returned to the Contractor marked "AMEND RESUBMIT", the Contractor shall revise the said drawing and shall resubmit eight (8) copies of said revised drawing to the PolWD.
  - h. If one (1) print of the drawings is returned to the Contractor marked "REJECTED RESUBMIT", the Contractor shall revise the said drawings and shall resubmit eight (8) copies of said revised drawing to the PolWD.
  - i. Fabrication of an item shall not be commenced before the PolWD has reviewed/examined the pertinent shop drawings and returned copies to the Supplier marked either "NO EXCEPTIONS TAKEN" or "MAKE CORRECTIONS NOTED". Revisions indicated on shop drawings shall be considered as changes necessary to meet the requirements of the Contract Drawings and Specifications and shall not be taken as the basis of claims for extra work. The Contractor shall have no claim for damages or extension of time due to any delay resulting from the Contractor having to make the required revisions to shop drawings (unless reviewed by the PolWD of said drawings is delayed beyond a reasonable period of time and unless the Contractor can establish that the PolWD's delay in review actually resulted in a delay in the Contractor's Construction Schedule). The review of said drawings by the PolWD will be limited to checking for general agreement with the specifications and drawings, and shall in no way relieve the Contractor of the responsibility for errors or omissions contained therein nor shall review operate to waive or modify any provision contained in Specifications or Contract Drawings. Fabricating dimensions, quantities of material, applicable code requirements shall be the Contractor's responsibility.

### **3. REFERENCE TO STANDARDS OR PUBLICATIONS**

Any reference in the Specifications or Drawings to any specification, standard or publication of any organization shall, in the absence of a specific designation to the contrary, be understood to refer to the latest edition of the specification, standard or publication in effect as of the date of advertising the work. Internationally accepted standards equal to or better than specified standards or specifications are acceptable.

### **4. REFERENCE TO PROPRIETARY PRODUCTS**

Where references to proprietary products appear in the Specifications or Drawings, it is for the purpose of establishing an acceptable standard of quality or design but no

guarantee is given that said referenced manufacturer's products will meet all contract requirements without modifications. Unless a substitute is expressly prohibited, the Contractor may request approval of a substitute for any such proprietary product. Such request must be in writing and must include descriptive literature, specifications, test reports of samples, as appropriate, to enable the PolWD to determine the acceptability of the product proposed for substitution. No substitute product shall be used in the work until written approval has been received from the PolWD. All costs involved in making laboratory tests of the sample submitted as substitute for the specified materials shall be borne by the Contractor.

## **5. SPECIFICATIONS AND DRAWINGS FURNISHED TO CONTRACTOR**

The PolWD will furnish the Contractor with one (1) set of Specifications attached in the Contract Documents together with reduced drawings (if any) and two (2) sets full-scale Drawings.

## **6. CONSTRUCTION DRAWINGS**

The Contractor shall maintain at least one (1) set of blue prints of the construction drawings on the job site. These prints shall be marked and updated to indicate current job progress and shall show deviations from the Contract. These drawings shall show the actual location and depth of all mains, fittings, thrust blocks, valves, fire hydrants, service connections (if any) and all other items shown and specified. Valve locations shall be tied-in by reference to two or three existing permanent or semi-permanent ground features. Before final inspection, the Contractor shall transfer all as-built information from these construction drawings to a set of reproducible tracings and drawn in AutoCad latest version, which shall be delivered to the Project Engineer **within 30 days after the date of physical completion of the project.**





## ***Section VIII. Bill of Quantities***

### **Notes on the Bill of Quantities**

#### **Objectives**

The objectives of the Bill of Quantities are:

- a. to provide sufficient information on the quantities of Works to be performed to enable Bids to be prepared efficiently and accurately; and
- b. when a Contract has been entered into, to provide a priced Bill of Quantities for use in the periodic valuation of Works executed.

In order to attain these objectives, Works should be itemized in the Bill of Quantities in sufficient detail to distinguish between the different classes of Works, or between Works of the same nature carried out in different locations or in other circumstances which may give rise to different considerations of cost. Consistent with these requirements, the layout and content of the Bill of Quantities should be as simple and brief as possible.

#### **Daywork Schedule**

A Daywork Schedule should be included only if the probability of unforeseen work, outside the items included in the Bill of Quantities, is high. To facilitate checking by the Entity of the realism of rates quoted by the Bidders, the Daywork Schedule should normally comprise the following:

- a. A list of the various classes of labor, materials, and Constructional Plant for which basic daywork rates or prices are to be inserted by the Bidder, together with a statement of the conditions under which the Contractor will be paid for work executed on a daywork basis.
- b. Nominal quantities for each item of Daywork, to be priced by each Bidder at Daywork rates as Bid. The rate to be entered by the Bidder against each basic Daywork item should include the Contractor's profit, overheads, supervision, and other charges.

#### **Provisional Sums**

A general provision for physical contingencies (quantity overruns) may be made by including a provisional sum in the Summary Bill of Quantities. Similarly, a contingency allowance for possible price increases should be provided as a provisional sum in the Summary Bill of Quantities. The inclusion of such provisional sums often facilitates budgetary approval by avoiding the need to request periodic supplementary approvals as the future need arises. Where such provisional sums or contingency allowances are used, the SCC should state the manner in which they will be used, and under whose authority (usually the Procuring Entity's Representative's).

The estimated cost of specialized work to be carried out, or of special goods to be supplied, by other contractors should be indicated in the relevant part of the Bill of Quantities as a particular provisional sum with an appropriate brief description. A separate procurement procedure is normally carried out by the Procuring Entity to select such specialized contractors. To provide an element of competition among the Bidders in respect of any facilities, amenities, attendance, etc., to be provided by the successful Bidder as prime Contractor for the use and convenience of the specialist contractors, each related provisional sum should be followed by an item in the Bill of Quantities inviting the Bidder to quote a sum for such amenities, facilities, attendance, etc.

### **Signature Box**

A signature box shall be added at the bottom of each page of the Bill of Quantities where the authorized representative of the Bidder shall affix his signature. Failure of the authorized representative to sign each and every page of the Bill of Quantities shall be a cause for rejection of his bid.

These Notes for Preparing a Bill of Quantities are intended only as information for the Procuring Entity or the person drafting the Bidding Documents. They should not be included in the final documents.

# *Bill of Quantities*

## **EXPLORATORY/PRODUCTION WELL DRILLING AT PUMPING STATION NO. 3 BRGY. POBLACION**

<b>WORK ITEM</b>	<b>ESTIMATED TOTAL QUANTITY</b>	<b>UNIT PRICE (including tax) Pesos</b>	<b>PRICE (including tax) Pesos</b>
<b>I. MOBILIZATION</b>	<b>Lump Sum</b>		
II. GENERAL REQUIREMENTS			
II.A TEMPORARY FACILITIES			
II.A.1 Contractor's Field Office and Bunkhouse	<b>Lump Sum</b>		
II.A.2 Watchmen / Laborer	<b>110 days</b>		
II.A.3 Conditional Water Permit / Drilling Permit	<b>Lump Sum</b>		
II.A.4 Bacti-Test	<b>1 unit</b>		
II.A.5 Physical-Chemical Testing	<b>1 unit</b>		
II.A.6 Pesticide Testing	<b>1 unit</b>		
II.B PROJECT BILLBOARD/SIGNBOARD	<b>1 set</b>		
II.C TRAFFIC MANAGEMENT, SIGNAGES, AND BARRICADES			
II.C.1 Supply and Installation of Construction and Signage's	<b>Lump Sum</b>		
II.C.2. Personal Protective Equipment (PPE) and First Aid Supplies	<b>Lump Sum</b>		
<b>III. SITE PREPARATION</b>			
III.A Clearing and Grubbing	<b>Lump Sum</b>		

III.B Excavation for Concrete Foundation of Rig, Mudpit, Canals, and Guide Borehole	<b>Lump Sum</b>		
III.C Concreting of Foundation for Rig, and around the Conductor Pipe Casing	<b>Lump Sum</b>		
III.D Grouting of Mudpit and Canals	<b>Lump Sum</b>		
IV. SETTING-UP OF RIG INCLUDING TEST RUN	<b>Lump Sum</b>		
<b>IV. DRILLING OF 200mmØ PILOT HOLE</b> (Including strata sampling every one (1) meter interval from 1m to 150m)	<b>150 ln.m.</b>		
<b>V. GEOPHYSICAL BOREHOLE LOGGING OF PILOT HOLE</b> Including professional fee of Hydrogeologist for the Narrative Report on the Geophysical Logging Result, signing and sealing of Logging Result with recommended final well design, and electronic file of the logging results as required in the Special Provisions clauses 12.1 (2) & 12.4 (1).	<b>150 ln.m.</b>		
<b>VI. REAMING OF PILOT HOLE TO 450 mm Ø BOREHOLE</b> (2 shifts/day @ 8 hours per shift for a 16-hour operation)	<b>150 ln.m.</b>		
<b>VII. FURNISHING, FABRICATION, AND INSTALLATION OF 300mmØ SPIRAL WELDED EPOXY COATED STEEL CASING WITH MIN. THICKNESS OF 6mm (INCLUDING 6.0m SUMP PIPE WITH TAPERED BOTTOM)</b>	<b>98 ln.m.</b>		
<b>VIII. FURNISHING, FABRICATION, AND INSTALLATION OF 300mmØ STAINLESS STEEL CONTINUOUS SLOT WEDGE WIREWOUND SCREENS, SLOT SIZE 1.5mm (slot 60) at 3.0m LENGTH EACH SECTION</b>	<b>42 ln.m.</b>		
<b>IX. FURNISHING, FABRICATION, AND INSTALLATION OF CASING CENTRALIZER</b>	<b>Lump Sum</b>		
<b>X. FURNISHING AND INSTALLATION OF GRAVEL PACK</b>	<b>140 ln.m</b>		
<b>XI. DEFLOCCULATE DRILLING MUD WITH POLYPHOSPHATE SOLUTION</b>	<b>Lump Sum</b>		
<b>XII. DEVELOPMENT BY HIGH VELOCITY / WATER JETTING</b> Including Bailing Out of Settlements and 2 hrs Preliminary Testing (2 shifts/day @ 6 hours per shift for a 12-hour operation)	<b>12 hrs</b>		

<b>XIII. DEVELOPMENT BY SURGING</b> (2 shifts/day @ 6 hours per shift for a 12-hour operation)	<b>12 hrs</b>		
<b>XIV. DEVELOPMENT BY AIRLIFTING</b> (2 shifts/day @ 6 hours per shift for a 12-hour operation)	<b>12 hrs</b>		
<b>XV. STEP-DRAWDOWN PUMP TEST WITH FIVE (5) STEPS AT ONE (1) HOUR DURATION</b> Each step carried out in succession with discharge rate increasing in equal fraction with estimated discharge of 950 gpm (60 lps.)	<b>5 hrs</b>		
<b>XVI. CONTINUOUS CONSTANT DISCHARGE RATE PUMPING TEST (72 HOURS)</b> Estimated Q = 950 gpm (60 lps) (Including Bailing Out of Settlements) (3 shifts/day @ 8 hours per shift for a 24-hour operation)	<b>72 hrs</b>		
<b>XVII. FURNISHING AND INSTALLATION OF CLAY SEAL</b>	<b>1 ln.m.</b>		
<b>XVIII. CEMENT GROUTING OF ANNULUS</b>	<b>15 ln.m</b>		
<b>XIX. FURNISHING AND INSTALLATION OF WELL HEAD CAP, 50mmØ GRAVEL TUBE AND 50mmØ WATER LEVEL SOUNDING TUBE WITH SCREW CAP AND CONCRETING OF PEDESTAL AND PAINTING OF STICK-UP PIPE</b>	<b>16 ln.m.</b>		
<b>XX. DEMOBILIZATION</b>	<b>Lump Sum</b>		

## ***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; **and**
- ☐ (d) Special PCAB License in case of Joint Ventures **and** registration for the type and cost of the contract to be bid; **and**
- ☐ (e) Original copy of Bid Security. If in the form of a Surety Bond, submit also a certification issued by the Insurance Commission **or** original copy of Notarized Bid Securing Declaration; **and**
- ☐ (f) Project Requirements, which shall include the following:
  - ☐ a. Organizational chart for the contract to be bid;
  - ☐ b. List of contractor’s key personnel (*e.g.*, Project Engineer, 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 PolWDship or certification of availability of equipment from the equipment lessor/vendor for the duration of the project, as the case may be; **and**
- ☐ (g) Original duly signed Omnibus Sworn Statement (OSS) **and** if applicable, Original Notarized Secretary’s Certificate in case of a corporation, partnership, or cooperative; or Original Special Power of Attorney of all members of the joint venture giving full power and authority to its officer to sign the OSS and do acts to represent the Bidder.

#### Financial Documents

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

***Class “B” Documents***

- ☐ (i) 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**

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

***Other documentary requirements under RA No. 9184***

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



