EC: 018341200 FORTER BARRETA C. LOBENIAC

REPUBLIQUE DU CAMEROUN Paix - Travail - Patrie

MINISTERE DE LA DECENTRALISATION ET DU DEVELOPEMENT LOCAL

DELEGATION REGIONALE DU NORD OUEST

DEPARTEMENT DE NGOKETUNJIA

ARRONDISSEMENT DE BABESSI

COMMUNE DE BABESSI



REPUBLIC OF CAMEROON Peace - Work - Fatherland

MINISTRY OF DECENTRALIZATION AND LOCAL DEVELOPMENT

NORTH WEST REGIONAL DELEGATION

NGOKETUNJIA DIVISION

BABESSI SUB-DIVISION

BABESSI COUNCIL

## MINISTRY OF DECENTRALIZATION AND LOCAL DEVELOPMENT

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OPEN NATIONAL INVITATION TO TENDER
TENDER N°09/ONIT/MINDDEVEL/BC/BCITB/2025 OF 21/01/2025
FOR THE CONSTRUCTION OF A BOREHOLE POWERED BY
SOLAR ENERGY AND LINKING TO THE BANGOLAN SCAN
WATER SYSTEM, BABESSI COUNCIL AREA, NGOKETUNJIA
DIVISION OF THE NORTH WEST REGION.

PROJECT OWNER: THE LORD MAYOR OF BABESSI COUNCIL.

FINANCING: PIB MINEE - 2025

BUDGET HEAD: IMPUTATION:

| FINANCIAL | YEAR | 2025 |
|-----------|------|------|
|-----------|------|------|

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## Document No. 1 TENDER NOTICE

REPUBLIQUE DU CAMEROUN Paix - Travail - Patrie

MINISTERE DE LA DECENTRALISATION ET DU DEVELOPEMENT LOCAL

DELEGATION REGIONALE DU NORD OUEST

DEPARTEMENT DE NGOKETUNJIA

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NORTH WEST REGIONAL DELEGATION

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### **TENDER NOTICE**

OPEN NATIONAL INVITATION TO TENDER N°09/ ONIT/MINDDEVEL/BC/BCITB/2025

OF 21/01/2025 FOR THE CONSTRUCTION OF A BOREHOLE POWERED BY SOLAR ENERGY AND LINKING TO THE BANGOLAN SCAN WATER SYSTEM, BABESSI COUNCIL AREA, NGOKETUNJIA DIVISION OF THE NORTH WEST REGION.

#### Subject of the Invitation to Tender: 1.

Within the framework of 2025 Public Investment Budget, The Mayor of Babessi Council, Contracting Authority hereby launches an Open National Invitation to Tender for The Construction of a Borehole Powered by Solar Energy and Linking to The Bangolan Scan Water System, Babessi Council Area, Ngoketunjia Division of the North West Region. Nature of work:

Work to be done consists of:

- ✓ Construction of a borehole;
- ✓ Supply and installation of a submersible solar pump with a flow rate of 4.2m3/h and TMH of
- Supply and installation of PV Panels. Wp 325W, monocrystalline with all accessories to be
- Installation of automatic control system with all necessary accessories for the pumping ✓ Construction of valve chamber;
- Pipeline construction;
- ✓ Construction of public stand pipes with valve chamber and a soak-away pit with reinforce
- ✓ Supply and laying of PVC Ø40mm NP10 to pump water from the borehole to the elevated
- ✓ Supply and laying of PVC Ø63mm NP10 for the distribution pipeline;
- ✓ Supply and laying of PVC Ø40mm NP10 for the distribution pipeline and connections; ✓ Pipeline excavation and backfill 40x80cm;
- Rehabilitation of the existing Scan Water storage tank of 40m3 and fencing of 15m x 15m with wire mesh on 60x60 angle bars placed 3m spacing
- ✓ Training and putting in place of two (02) Pump and solar panel Caretakers by the contractor ✓ Supply of a plumbing tool box;
- Technical report of completed project.

#### **Execution deadline** 3.

The maximum deadline provided by the Delegated Contracting Authority for the execution of the works forming the subject of this Invitation to Tender is three (03) months

#### 4. Lot

The work is as follows:

Construction of a Borehole Powered by Solar Energy and Linking to The Bangolan Scan Water System, Babessi Council Area, Ngoketunjia Division of The North West Region.

#### 5. Estimated cost

The estimated cost after preliminary studies is 15,000,000 FCFA (Fifteen million FCFA)

#### 6. Participation and origin

Participation to this Invitation to Tender is opened to Cameroonian enterprises that are in compliance with the Cameroon laws.

NB: Bidders should not complain of insecurity at the site during the execution of the project.

#### 7. Financing

Works which form the subject of this Invitation to Tender shall be financed by the PIB MINEE 2025.

#### 8. Bid bond

Each bidder must include in his administrative documents, a bid bond issued by a first-rate banking establishment or an insurance company approved by the Ministry in charge of Finance and whose list is found in document No. 12 of the Tender File, of an amount of 300,000 (Three Hundred Thousand FCFA) and valid for thirty (30) days beyond the date of validity of bids

#### 9. Consultation of Tender File:

The file may be consulted during working hours at the Babessi Council, Contract Award Service, as soon as this notice is published.

#### 10. Acquisition of Tender File:

The file may be obtained from the Babessi Council, Contract Award Service as soon as this notice is published against payment of the sum of 25,000 Francs CFA (Twenty-five thousand Francs CFA), payable at the Babessi Council Treasury, representing the cost of purchasing the Tender File.

#### 11. Submission of bids:

Each offer drafted in English or French in 07 (seven) copies including 01 (one) original and 06 (six) copies marked as such, should reach the Babessi Council, Contract Award Service not later than 04/03/2025 at 10:00 am local time and should carry the inscription:

<< OPEN NATIONAL INVITATION TO TENDER N°09/ONIT/MINDDEVEL/BC/BCITB/2025 OF 21/01/2025 FOR THE CONSTRUCTION OF A BOREHOLE POWERED BY SOLAR ENERGY AND LINKING TO THE BANGOLAN SCAN WATER SYSTEM, BABESSI COUNCIL AREA, NGOKETUNJIA DIVISION OF THE NORTH WEST REGION. >>

"TO BE OPENED ONLY DURING THE BID-OPENING SESSION"

#### 12. Admissibility of bids

Under penalty of being rejected, only originals or certified true copies signed by the issuing service or administrative authorities (Senior Divisional Officer, Divisional Officers) must imperatively be produced in accordance with the Special Regulations of the Invitation to Tender.

They must obligatorily not be older than three (3) months preceding the date of submission of bids or may be established after the signature of the tender notice

Any bid not in compliance with the prescriptions of the Tender File shall be rejected. This refers especially to the absence of a bid bond issued by a first-rate bank approved by the Minister in charge of Finance. .

#### 13. Opening of bids:

The bids shall be opened in a single phase. The opening of the administrative documents, the Technical and Financial offers will take place on the 04/03/2025 at 11 AM local time, in the conference hall of the Babessi Council Internal Tenders' Board, by its competent Members. Only bidders may attend or be represented by duly mandated persons of their choice.

#### 14. Evaluation criteria

The bids shall be evaluated according to the main criteria as follows:

#### A. Eliminatory criteria

- Absence or non-conformity of an element in the administrative file;
- Deadline for delivery higher than prescribed;
- 3. -False declaration or falsified documents;

- 4. -Absence or insufficient bid bond;
- 5. -A bid with the external envelope carrying a sign or mark leading to the identification of the bidder;
- 6. -Incomplete financial file;
- 7. -Change or omission of quantity or unit price in the financial bid;
- 8. Score less than 20/25 of essential criteria;

#### B. Essential criteria

- 1 General presentation of the Tender Files;
- 2- Financial capacity;
- 3- References of the company in similar achievements;
- 4- Quality of the personnel;
- 5- Technical organization of the works;
- 6- Safety measures on the site;
- 7- Logistics;
- 8- Attestation and report of site visit;
- 9- Special Technical Clauses initialed in all the pages;
- 10-Special Administrative Clauses completed and initialed in all the pages.

#### 15. Award

This evaluation will be done in a purely positive way (yes) or negative (no) with an acceptable minimum of 20/25 of the essential criteria taken in account.

The contract will be awarded to the bidder who would have proposed the offer with the lowest amount, in conformity with the regulations of the Tender Documents and having satisfied to 100% of the eliminatory criteria and at least 20/25 of the essential criteria.

#### 16. Validity of bids

Bidders will remain committed to their offers for ninety (90) days from the deadline set for the submission of tenders.

#### 17. Complementary information

Complementary technical information may be obtained during working hours from the Babessi Council's Contract Award Service. **Tél.**: 670 76 34 71

| Done at Babessi on | The Mayor, Babessi Counci   |  |  |
|--------------------|-----------------------------|--|--|
|                    | (The Contracting Authority) |  |  |
| Copies:            |                             |  |  |
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REPUBLIQUE DU CAMEROUN Paix - Travail - Patrie

MINISTERE DE LA DECENTRALISATION ET DU DEVELOPEMENT LOCAL

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REPUBLIC OF CAMEROON Peace - Work - Fatherland

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NORTH WEST REGIONAL DELEGATION

NGOKETUNJIA DIVISION

BABESSI SUB DIVISION

BABESSI COUNCIL

#### **AVIS D'APPEL D'OFFRES**

AVIS D'APPEL D'OFFRES NATIONAL OUVERT N° 09/AONO/MINDDEVEL/BC/BCITB/2025 DU 21/01/2025 POUR LA CONSTRUCTION D'UN FORAGE ALIMENTE PAR ENERGIE SOLAIRE ET RELIER AU SYSTEME D'EAU SCANWATER DE BANGOLAN DANS L'ARRONDISSEMENT DE BABESSI, DEPARTEMENT DE NGOKETUNJIA, REGION DU NORD OUEST.

#### 1. Objet de l'Appel d'Offre

Dans le cadre de l'exercice budgétaire 2025, le Maire de Babessi, Autorité Contractante lance un Appel d'Offres National Ouvert Pour La Construction D'un Forage Alimente Par Energie Solaire Et Relier Au Systeme D'eau Scanwater De Bangolan Dans L'arrondissement De Babessi, Departement De Ngoketunjia, Region Du Nord-Ouest.

#### 2. Consistance des travaux

Les travaux comprennent notamment :

- ✓ Construction d'un forage;
- ✓ Fourniture et installation d'une pompe solaire submersible avec un débit de 4.2m3/h et une hauteur manométrie ≥100m, P≥2200W avec tous ses accessoires;
- ✓ Fourniture et Installation des panneaux solaires de 325W, monocristallin avec tous les accessoires de fixation sur le château d'eau existant;
- ✓ Installation d'un système de contrôle automatique avec tous les accessoires pour système de pompage;
- ✓ Construction d'une chambre de la vanne de contrôle :
- ✓ Construction de la canalisation ;
- ✓ Construction d'une borne-fontaine publique avec de chambre de vanne et une fosse en l'utilisant du béton arme à 400kg/m3;
- ✓ Fourniture et pose de tuyau PVC Ø40mm NP10 pour pomper l'eau du forage au reservoir de stockage ;
- ✓ Fourniture et pose de tuyau PVC Ø63mm NP10 pour la distribution ;
- ✓ Fourniture et pose de tuyau PVC Ø40mm NP10 pour la distribution;
- ✓ Excavation et remblai de la canalisation 40x80cm;
- ✓ La réhabilitation du château d'eau SCANWATER existant de 40m³ avec clôture en fils barbelés;
- ✓ Formation et mise en place de deux (02) technicien pour la maintenance par l'entrepreneur :
- ✓ Approvisionnement d'un box complet d'outils.
- ✓ Rapport technique du projet réalisé.

#### 3. Délais d'exécution

Le délai maximum prévu par le Maître d'Ouvrage Délégué pour la réalisation des travaux objet du présent appel d'offres est de trois (03) mois.

#### 4. Allotissement

Le travail est ci-après défini :

Construction of a Borehole Powered by Solar Energy and Linking to The Bangolan Scan Water System, Babessi Council Area, Ngoketunjia Division of the North West Region.

#### 5. Coût prévisionnel

Le coût prévisionnel de l'opération à l'issue des études préalables est de Quarante million de francs CFA (15 000 000 FCFA)

#### 6. Participation et origine

La participation à cette consultation est ouverte aux entreprises de droit camerounais.

NB: Les soumissionnaires ne doivent pas se plaindre de l'insecurité sur le site pendant execution du projet.

#### 7. Financement

Les travaux objet du présent appel d'offres sont financés par le Budget d'Investissement Publics MINEE du Cameroun de l'exercice 2025

#### Cautionnement provisoire

Chaque soumissionnaire doit joindre à ses pièces administratives, une caution de soumission établie par une banque de premier ordre ou une compagnie d'assurance agréée par le Ministère chargé des finances et dont la liste figure dans la pièce 12 du DAO, d'un montant de Trois cent mille FCFA (300 000 FCFA) et valable pendant trente (30) jours au-delà de la date originale de validité des offres.

#### 9. Consultation du Dossier d'Appel d'Offres

Le Dossier d'Appel d'Offres peut être consulté et obtenu aux heures ouvrables à la Marie de Babessi Service de Passation des Marchés Publics dès Publication du présent avis.

#### Acquisition du Dossier d'Appel d'Offres

Le dossier peut être obtenu aux heures ouvrables à la Marie de Babessi, Service de Passation des Marchés Publics dès Publication du présent avis, contre présentation d'une quittance de versement à la Trésorerie Municipale de Babessi de la somme non remboursable de 25 000 F CFA (Vingt-cinq mille Francs CFA).

#### 11. Remise des offres

Chaque offre rédigée en français ou en anglais en sept (07) exemplaires dont un (01) original et six (06) copies marquées comme telles, devra parvenir contre récépissé à la Marie de Babessi, Service de Passation des Marchés Public au plus tard le 04/03/2025 à 10 h 00, heure locale et devra porter la mention suivante :

"AVIS D'APPEL D'OFFRES NATIONAL OUVERT N° 09/AONO/MINDDEVEL/NC/NCITB/2025 DU 21/01/2025 POUR LA CONSTRUCTION OF A BOREHOLE POWERED BY SOLAR ENERGY AND LINKING TO THE BANGOLAN SCAN WATER SYSTEM, BABESSI COUNCIL AREA, NGOKETUNJIA DIVISION OF THE NORTH WEST REGION"

((A N'OUVRIR QU'EN SEANCE DE DEPOUILLEMENT))

#### 12. Recevabilité des offres

Sous peine de rejet, les pièces du dossier administratif requises doivent être produites en originaux ou en copies certifiées conformes par le service émetteur ou une autorité administrative (Préfet, Sous-préfet,), conformément aux stipulations du Règlement Particulier de l'Appel d'Offres.

Elles doivent dater de moins de trois (03) mois précédant la date originale de dépôt des offres ou avoir été établies postérieurement à la date de signature de l'Avis d'Appel d'Offres.

Toute offre incomplète conformément aux prescriptions du Dossier d'Appel d'Offres sera déclarée irrecevable. Notamment l'absence de la caution de soumission délivrée par une banque de premier ordre agréée par le Ministère chargé des Finances.

#### 13. Ouverture des plis

L'ouverture des plis se fera en un temps. L'ouverture des pièces administratives et des offres techniques et financières aura lieu le 04/03/2025 à 11h00, heure locale, dans la salle de conférence de la Marie de Babessi, par la Commission interne de Passation de Marchés siégeant en présence des soumissionnaires ou de leurs représentants dûment mandatés et ayant une parfaite connaissance du dossier.

#### 14. Critères d'évaluation

Les offres seront évaluées selon les principaux critères suivants :

#### A - Critères éliminatoires

Il s'agit notamment:

- 1- Absence ou non-conformité d'une pièce administrative ;
- 2- Délai d'exécution supérieur à celui prescrit (supérieur à trois mois) ;
- 3- Fausses déclarations ou pièces falsifiées ;
- 4- Absence ou insuffisance de la caution provisoire de soumission ;
- 5- Offres dont l'enveloppe extérieure porte des mentions permettant de reconnaître le Soumissionnaire;
- 6- Offres financière incomplète,
- 7- Le changement d'une unité ou d'une quantité dans l'offre financière ;
- 8- Le non-respect de 20/25 des critères essentiels ;

#### B - Critères essentiels

Les critères relatifs à la qualification des candidats porteront à titre indicatif sur :

- 1- Présentation générale de l'offre ;
- 2- Capacité financière ;
- 3- Références de l'entreprise dans les réalisations similaires ;
- 4- Qualité du personnel ;
- 5- Organisation technique des travaux ;
- 6- Sécurité au chantier ;
- 7- Moyens logistiques;
- 8- Attestation et rapport de visite du site ;
- 9- Cahier des Clauses Techniques Particulières paraphé à chaque page;
- 10-Cahier des Clauses Administratives Particulières complété et paraphé à chaque page.

Les critères essentiels sont soumis à des minima dont le détail est donné dans le Règlement Particulier de l'Appel d'Offres (RPAO).

#### 15. Attribution

Cette évaluation se fera de manière purement positive (oui) ou négative (non) avec un minimum acceptable d'au moins 20/25 de l'ensemble des critères essentiels pris en compte.

Le marché sera attribué au soumissionnaire qui aura proposé l'offre la moins disante, conforme pour l'essentiel aux prescriptions du Dossier d'Appel d'Offres, ayant satisfait à 100% des critères éliminatoires et au moins 20/25 des critères essentiels.

#### 16. Durée de validité des offres

Les soumissionnaires restent engagés par leur offre pendant 90 jours à partir de la date limite fixée pour la remise des offres.

#### 17. Renseignements complémentaires

Les renseignements complémentaires d'ordre technique peuvent être obtenus auprès du service de passation des Marches Publics de la Mairie de Babessi, Tél. : 670 76 34 71

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East Rabossi la

Le Maire,
(Autorité Contractant)

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(Autorité Contractant)

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- 6.3 Bidders must equally present sufficiently detailed proposals to demonstrate that they comply with the technical specifications and execution time-limits set in the Special Regulations of the Invitation to Tender.
- 6.4 Bidders requesting to benefit from the margin of preference must furnish all the necessary information to prove that they satisfy the eligibility criteria set in article 33 of the General Regulations of the Invitation to Tender.

#### Article 7: Visit of works site

- 7.1 The bidder is advised to visit and inspect the site and its environs and obtain by himself and under his own responsibility, all the information which may be necessary for the preparation of the bid and the execution of the works. The related cost of the visit of the site shall be borne by the bidder.
- 7.2 The Project Owner shall authorise the bidder and his employees or agents to enter the premises and the land for the said visit but only on the express condition that the bidder, his employees and agents free the Project Owner, his employees and agents of any responsibility that may ensue and indemnify them if necessary and that they shall remain responsible for any deadly or corporal accident, loss or material damages, costs and fees incurred from this visit.
- 7.3 The Project Owner may organise a visit of the site of the works during the preparatory meeting to establishing the bids mentioned in article 19 of the General Regulations of the Invitation to Tender.

#### B. Tender File

#### Article 8: Content of Tender File

- 8.1 The Tender File describes the works forming the subject of the Contract, sets the consultation procedure of Contractors and specifies the terms of the Contract. Besides the addendum (addenda) published in accordance with article 10 of the General Regulations of the Invitation to Tender, it includes the following documents:
  - Document No. 1. The Tender Notice;
  - Document No. 2. The General Regulations of the Invitation to Tender;
  - Document No. 3. The Special Regulations of the Invitation to Tender;
  - Document No. 4. The Special Administrative Conditions;
  - Document No. 5. The Special Technical Conditions;
  - Document No. 6. The schedule of unit prices;
  - Document No. 7. The bill of quantities and estimates;
  - Document No. 8. The sub details of unit prices;
  - Document No. 9. Model documents of the Contract:
    - a. The execution schedule;
    - b. Model of forms presenting the equipment, personnel and references;
    - c. Model bidding letter;
    - d. Model bid bond;
    - e. Model final bond;
    - f. Model of bond of start-off advance;
    - g. Model of guarantee in replacement of the retention fund;
    - h. Model Contract;

Document No. 10. Models to be used by bidders;

a. Model Contract;

Document No. 11. Justifications of preliminary studies; to be filled by the Project Owner or Delegated Project Owner;

- (a) A bidder (including all members of a group of enterprises and all sub-Contractors to the bidder) must be from an eligible country, in accordance with the funding agreement.
- (b) A bidder (including all members of a group of enterprises and all sub-Contractors to the bidder) must not be in a situation of conflict of interest, subject to disqualification. A bidder shall be judged to be in a situation of conflict of interest if he:
  - Is or was associated in the past with an enterprise (or a subsidiary of this enterprise) which provided consultancy services for the conception, preparation of specifications and other documents used within the scope of Contracts awarded for this Invitation to Tender; or
    - ii) Presents more than one bid within the context of Invitation to Tender, except authorised variants according to article 17, where need be; meanwhile, this does not prevent the participation of sub-Contractors in more than one bid.
    - iii) The Contracting Authority or Project Owner has financial interests in the capital in a way as to compromise the transparency of the procedures of award of Public Contracts.
- (c) The bidder must not have been excluded from bidding for Public Contracts.
- (d) A Cameroonian Public enterprise may participate in the consultation if it can demonstrate that it is (i) legally and financially autonomous, (ii) managed according to commercial laws and (iii) not under the direct supervisory authority of the Contracting Authority or Project Owner.

### Article 5: Building materials, materials, supplies, equipment and authorised services

- 5.1 Building materials, the Contractor's materials, supplies, equipment and services forming the subject of this Contract must originate from countries meeting the criteria of origin defined in the Special Regulations of the Invitation to Tender and all expenditure done within the context of the Contract shall be limited to the said building materials, materials, supplies, equipment and services.
- 5.2 Within the meaning of this 5.1 above, the term "originate" shall designate the place where the goods are extracted, cultivated, produced, manufactured and from where the services originate.

#### Article 6: Qualification of bidder

- 6.1 As an integral part of their bid, bidders must:
  - (a) submit a power of attorney making the signatory of the bid bound by the bid; and
  - (b) provide all information (complete or update information included in their request for prequalification which may have changed in the case where the candidates took part in prequalification) requested of bidders in the Special Regulations of the Invitation to Tender, in order to establish their qualification to execute the Contract.

#### Where necessary, bidders should provide information relating to the following points:

- (i) The production of certified balance sheets and recent turnovers;
- (ii) Access to a line of credit or availability of other financial resources;
- (iii) Orders acquired and Contracts awarded;
- (iv) Pending litigations;
- (v) Availability of indispensable equipment.
- 6.2 Bids presented by two or more associated undertakings (Joint-Contracting) must satisfy the following conditions:
- (a) The bid must include all the information listed in article 6(1) above. The Special Regulations must indicate the information to be furnished by the group and that to be furnished by each member of the group;
- (b) The bid and the Contract must be signed in a way that is binding on all members of the group;
- (c) The nature of the group (joint or several) must be specified in the Special Regulations and justified with the production of a joint venture agreement in due form;
- (d)The member of the group designated as the representative will represent all the undertakings vis à vis the Project Owner and Contracting Authority with regard to the execution of the Contract;
- (e) In case of joint co-Contracting, the co-Contractors shall share the sums which are paid by the Project Owner into a single account. On the other hand, each undertaking is paid into its own account by the Project Owner where it is joint co-Contracting.

- Document No. 12. List of first grade banking establishments or financial institutions approved by the Minister in charge of Finance authorised to issue bonds for Public Contracts to be inserted by the Contracting Authority.
- 8.2 The bidder must examine all the regulations, forms, conditions and specifications contained in the Tender File. It is up to him to furnish all the information requested and prepare a bid in compliance with all aspects of the said file.

Article 9: Clarifications on the Tender File and complaints

9.1 Any bidder who wants to obtain clarifications on the Tender File may request them from the Contracting Authority in writing or by electronic mail (fax or e-mail) at the Contracting Authority's address indicated in the Special Regulations of the Invitation to Tender and send a copy to the Project Owner. The Contracting Authority replies in writing to any request for clarification received at least fourteen (14) days prior to the deadline for the submission of bids.

A copy of the Contracting Authority's response, indicating the question posed but not mentioning the author, is addressed to all bidders who bought the Tender File.

- 9.2 Between the Publication of the tender notice including the pre-qualification phase of candidates and the opening of bids, any bidder who feels aggrieved in the Public Contracts award procedure may lodge a complaint to the Minister in charge of Public Contracts.
- 9.3 A copy of the complaint should be addressed to the Contracting Authority and to the body in charge of the Regulation of Public Contracts and the chairperson of the Tenders Board.
- 9.4 The Contracting Authority has five (5) days to react. A copy of the reaction shall be forwarded to MINMAP and the body in charge of the regulation of Public Contracts.

#### Article 10: Amendment of the Tender File

- 10.1 The Contracting Authority may at any moment, prior to the deadline for the submission of bids and for any reason, be it at his initiative or in reply to a request for clarification formulated by a bidder, amend the Tender File by publishing an addendum.
- 10.2 Any published addendum shall be an integral part of the Tender File, in accordance with article 8.1 of the General Regulations of the Invitation to Tender and must be communicated in writing or made known by a traceable means to all bidders who bought the Tender File.
- 10.3 In order to give bidders sufficient time to take account of the addendum in the preparation of their bids, the Contracting Authority may postpone as is necessary, the deadline for the submission of bids, in accordance with provisions of article 22 of the General Regulations of the Invitation to Tender

#### C Preparation of bids

#### Article 11: Tender costs

The candidate shall bear the costs related to the preparation and presentation of his bid and the Contracting Authority and the Project Owner shall in no case be responsible for these costs nor pay for them whatever the evolution or outcome of the Invitation to Tender procedure.

#### Article 12: Language of bid

The bid as well as any correspondence and any document exchanged between the bidder and the Contracting Authority shall be written in English or French. Complementary documents and the forms provided by the bidder may be written in another language on condition that a precise translation into either English or French of the passages concerning the bid is included; in which case for reasons of interpretation, the translation shall be considered to be authentic.

#### Article 13: Constituent documents of the bid

13.1 The bid presented by the bidder shall include the documents detailed in the Special Regulations of the Invitation to Tender, duly filled and put together in three volumes:

#### a. Volume 1: Administrative file

It includes:

- i) all documents attesting that the bidder:
  - has subscribed to all declarations provided for by the laws and regulations in force;
  - paid all taxes, duties, contributions, fees or deductions of whatever nature;
  - is not winding up or bankrupt;
  - is not the subject of an exclusion order or forfeiture provided for by the law in force;
  - ii) The bid bond established in accordance with the provisions of article 17 of the General Regulations of the Invitation to Tender;
  - iii) the written confirmation empowering the signatory of the bid to commit the bidder, in accordance with the provisions of article 6(1) the General Regulations of Invitation to Tender.

#### b. Volume 2: Technical bid

b.1 Information on qualifications

The Special Regulations list the documents to be furnished by bidders to justify the qualification criteria mentioned in article 6(1) of the Special Regulations of the Invitation to Tender.

b.2 Methodology

The Special Conditions of the Invitation to Tender specifies the constituent elements of the technical bid of the bidders especially: a methodological statement on an analysis of the works and specifying the organisation and programme which the bidder intends to put in place or use to execute the works (installations, schedule, Quality Assurance Plan (QAP), sub-Contracting, attestation of visit of the site, where necessary, etc).

b.3 Proof of acceptance of conditions of the Contract

The bidder shall submit duly initialled copies of the administrative and technical documents relating to the Contract, namely:

- 1. The Special Administrative Conditions (SAC);
- 2. The Special Technical Conditions (STC).

b.4 Commentaries (optional)

A commentary on the technical choices of the project and possible proposals.

#### c. Volume 3: Financial bid

The Special Regulations specify the elements that will help in justifying the cost of the works, namely:

- The signed and dated original bid prepared according to the attached model, stamped at the prevailing rate;
- 2. The duly filled Unit Price Schedule;
- 3. The duly filled detailed estimates;
- 4. The sub-details of prices and/or breakdown of all-in prices;
- 5. The projected schedule of payments, where need be.

In this regard, the bidders will use the documents and models provided in the Tender File, subject to the provisions of article 17(2) of the General Regulations of the Invitation to Tender concerning the other possible forms of guarantees.

13.2 If in accordance with the provisions of the Special Regulations of the Invitation to Tender, the bidders present bids for several lots of the same Invitation to Tender, they could indicate rebates offered in case of award of more than one lot.

Article 14: Bid price

- 14.1 Except otherwise stated in the Tender File, the amount of the Contract shall cover all the works described in article 1.1 of the General Regulations of the Invitation to Tender, on the basis of the price schedule and the detailed bill of quantities and estimates presented by the bidder.
- 14.2 The bidder shall fill the unit prices and totals of all items on the schedule and bill of quantities and estimates.
- 14.3 Subject to contrary provisions provided for in the Special Regulations and in the Special Administrative Conditions, all dues, taxes and fees payable by the bidder on grounds of the Contract or on any other ground, thirty (30) days prior to the submission of the bids, shall be included in the prices and in the total amount of the bid presented by the bidder.
- 14.4 If a price revision/updating clause is provided for in the Contract, the date of establishment of the initial price, as well as the price revision/updating conditions for the said price must be specified. This is with the understanding that any Contract of duration less than one (1) year shall not be subject to price revision.
- 14.5 All unit prices must be justified by sub-details established in accordance with the structure proposed in document 8 of the Tender File.

Article 15: Currency of bid and payment

- 15.1 In case of international invitations to tender, the currencies of the bid shall follow the provisions of either Option A or Option B below, the applicable option being that retained in the Special Regulations of the Invitation to Tender.
- **15.2 Option A:** The amount of the bid shall be entirely made in the national currency. The amount of the bid, unit prices of the price schedule and the prices of the bill of quantities and estimates are completely made in CFA francs in the following manner:
  - a) Prices shall be entirely drawn in the national currency. The bidder who intends to commit expenditures in other currencies for the execution of the works shall indicate in the annex to the bid the percentage(s) of the amount of the bid necessary to cover the needs in foreign currencies, without exceeding the maximum of the three currencies of member countries of the funding institution of the Contract.
  - b) The exchange rates used by the bidder to convert his bid into the national currency shall be specified by the bidder in an annex to the bid in compliance with the specifications of the Special Regulations. These rates shall be applied for any payment within the framework of the Contract so that the retained bidder does not bear any change in the exchange rate.
- 15.3 Option B: The amount of the bid shall be directly made in the national and foreign currency at the rates fixed in the Special Regulations.

The bidder shall draw the unit prices of the price schedule and the prices of the bill of quantities and estimates in the following manner:

(a) The prices of inputs necessary for the works which the bidder intends to procure in the Contracting Authority's country shall be in currency of the Contracting Authority's country specified in the Special Regulations and called "national currency";

(a) The prices of inputs necessary for works which bidder intends to procure out of the Contracting Authority's country shall be in the currency of the country of origin of the

bidder or of the currency of an eligible member country widely used in international trade.

- 15.4 The Contracting Authority may request the bidders to explain the needs in national and foreign currencies and to justify that the amounts included in the unit and total prices and indicated in annex to the bids are reasonable; to this end, a detailed statement of their needs in foreign currencies shall be furnished by the bidder.
- 15.5 During the execution of the works, most of the foreign currency to be paid as part of Contract may be revised by mutual agreement between the Contracting Authority and the entrepreneur in a way as take account of any modification in the foreign currency needs within the context of the Contract.

#### Article 16: Validity of bids

- 16.1 Bids must remain valid during the period stated in the Special Regulations from the date of submission of the bids fixed by the Contracting Authority, in application of article 22 of the Special Regulations. A bid valid for a shorter period shall be rejected by the Contracting Authority or Delegated Contracting Authority as not being in compliance.
- 16.2 Under exceptional circumstances, the Contracting Authority may seek the approval of bidders to extend the validity time-limit. The request and the responses that will be given shall be in writing (or by fax). The validity of the bid bond provided for in article 17 of the General Regulations shall equally be extended for a corresponding duration. A bidder may refuse to extend the validity of his bid without losing his bid bond. A bidder who consents to an extension shall not be asked to modify his bid nor shall he be authorised to do so.
- 16.3 Where the Contract does not include a price revision clause and that the period of validity of bids is extended by more than sixty (60) days, the amounts payable to the bidder retained shall be updated by application of the related formula featuring in the request for extension that the Contracting Authority addressed to bidders.

The updating period shall run from the date of overrun of sixty (60) days to the date of notification of the Contract or the Administrative Order for start of execution of works by the retained bidder, as specified in the Special Administrative Conditions. The effect of updating shall not be taken into account for purposes of evaluation of bids.

#### Article 17: Bid bond

- 17.1 In application of article 13 of the General Regulations, the bidder shall furnish a bid bond of the amount specified in the Special Regulations and which bid bond shall be a full part of his bid.
- 17.2 The bid bond must conform to the model presented in the Tender File; other models may be authorised subject to the prior approval of the Contracting Authority. The bid bond will remain valid for thirty (30) days beyond the original date set for the validity of bids or any other validity time-limit requested by the Contracting Authority and accepted by the bidder, in accordance with the provisions of article 16 (2) of the General Regulations.
- 17.3 Any bid without an acceptable bid bond shall be rejected by the Tenders Board as not in conformity. The bid bond of associated enterprises must be established in the name of the group submitting the bid and mention each member of the associated grouping.
- 17.4 The bid bonds of bidders who are not retained shall be returned within fifteen (15) days after Publication of the award result.
- 17.5 The bid bond of the successful bidder shall be released as soon as the latter would have signed the Contract and furnished the required final bond.
- 17.6 The bid bond may be seized:

- (a) if the bidder withdraws his bid during the period of validity;
- (b) if the retained bidder:
  - fails in his obligation to register the Contract in application of article 38 of the General Regulations;
  - fails in his obligation to furnish the required final bond in application of article 38 of the General Regulations;
  - iii) refuses to receive notification of the Administrative Order to commence execution.

Article 18: Varying proposals of bidders

- 18.1 Where the works can be executed within variable deadlines, the Special Regulations shall specify these deadlines and shall indicate the method retained for the evaluation of the completion deadline proposed by the bidder within the specified deadlines. Bids that propose deadlines beyond those specified shall be considered as not being in conformity.
- 18.2 Except in the case mentioned in article 18(3) below, bidders wishing to offer technical variants must first assess the basic solution of the Contracting Authority as described in the Tender File and furnish in addition all the information which the Contracting Authority needs for a complete evaluation of the proposed variant, including the plans, calculations, technical specifications, sub-details of prices and proposed construction methods and all other useful information. If necessary, the Contracting Authority will examine only the technical variants of the bidder whose bid is in compliance with the basic solution has been evaluated as the lowest bid.
- 18.3 When according to the Special Regulations the bidders are authorised to directly submit the technical variants for certain parts of the works, these parts of the works must be described in the technical specifications. Such variants shall be evaluated on their own merit in accordance with the provisions of article 31(2) (g) of the General Regulations.

Article 19: Preparatory meeting to the establishment of bids

- 19.1 Except otherwise stipulated in the Special Regulations, a bidder may be invited to take part in a preparatory meeting which will hold at the date and place indicated in the Special Regulations.
- 19.2 The subject of the preparatory meeting shall be to furnish clarifications and answer any questions which may be raised at this stage.
- As much as possible, the bidder is requested to submit any question in a way as to reach the Contracting Authority at least one week before the meeting The Contracting Authority may not reply to questions received too late. In this case, the questions and answers shall be transmitted according to the methods set in article 19(4) below.
- 19.4 The minutes of the meeting, including the text of the questions asked and the replies given, including questions prepared after the meeting, shall be forwarded immediately to everyone who bought the Tender File. Any modification of documents of the Tender File listed in article 8 of the General Regulations which may prove to be necessary at the end of the preparatory meeting shall be done by the Contracting Authority by publishing an addendum in accordance with the provisions of article 10 of the General Regulations and not through the minutes of the preparatory meeting.
- 19.5 The fact that a bidder does not attend a preparatory meeting for the establishment of bids shall not be a reason for disqualification.

Article 20: Form and signature of bid

20.1 The bidder shall prepare an original of the constituent documents described in article 13 of the General Regulations in a volume clearly indicated "ORIGINAL". In addition, the bidder shall submit the number required in the General Regulations, bearing "COPY". In case of discrepancy, the original shall be considered as authentic.

20.2 The original and copies of the bid must be typed or written in indelible ink (photocopies shall be accepted in the case of copies) and shall be signed by the person(s) duly empowered to sign on behalf of the bidder, in accordance with article 6(1a) or 6(2c) of the General Regulations, as the case may be. All the pages of the bid containing alterations or changes must be initialled by the signatory (ies) of the bid.

20.3 The bid shall be bear no modification, suppression or alteration unless such corrections are initialled

by the signatory(ies) of the bid.

#### D. SUBMISSION OF BIDS

Article 21: Sealing and marking of bids

21.1 The bidder shall seal the original and each copy of the bid in separate envelopes (internal envelopes) by marking on these envelopes "ORIGINAL" and "COPY", as the case may be. The envelopes shall then be placed in another envelope which will equally be sealed but which will not give any indication regarding the identity of the bidder.

21.2 The external and internal envelopes:

 a) should be addressed to the Contracting Authority at the address indicated in the Special Regulations;

b) should bear the name and identification number of the project as indicated in the Special Regulations and bear the inscription "TO BE OPENED ONLY DURING THE BID-OPENING

SESSION" as specified in the Special Regulations.

21.3 The internal envelopes should equally carry the name and address of the bidder in a way as to enable the Contracting Authority return the sealed bid if it is late in accordance with article 23 and 24 of the General Regulations.

21.4 If the external envelope is not sealed and marked as indicated in paragraphs 21(1) and 21(2) above, the Contracting Authority shall not be responsible if the bid is misplaced or opened prematurely.

Article 22: Date and time-limit for submission of bids

22.1 The bids must be received by the Contracting Authority at the address specified in article 21(2) of the Special Regulations not later than the date and time stated in the Special Regulations.

22.2 The Contracting Authority may, at his discretion, postpone the deadline set for the submission of the bids by publishing an addendum in accordance with the provisions of article 10 of the General Regulations. In this case, all the rights and obligations of the Contracting Authority and bidders previously governed by the initial date will henceforth be governed by the new date.

Article 23: Late bids

Any bid received by the Contracting Authority beyond the deadline for the submission of bids in accordance with article 22 of the General Regulations shall be declared late and consequently rejected.

Article 24: Modification, substitution and withdrawal of bids

- 24.1 A bidder may modify or withdraw his bid after submitting it, on condition that the written notification of the modification or withdrawal is received by the Contracting Authority prior to the end of the time-limit prescribed for the submission of the bids. The said notification must be signed by an authorised representative in application of article 20(2) of the General Regulations. The modification or the corresponding replacement bid must be attached to the written notification. As the case may be, the envelopes must bear the inscription "WITHDRAWAL", and "REPLACEMENT BID" or "MODIFICATION".
- 24.2 Notification of modification, replacement or withdrawal of the bid by the bidder should be prepared, sealed, marked and forwarded in accordance with the provisions of article 21 of the General Regulations. Withdrawal may equally be notified by telex but should in this case be

confirmed by a duly signed written notification whose date, post mark being authentic, shall not be posterior to the time-limit set for the submission of bids.

- 24.3 In application of article 24(1), bids being requested to be withdrawn by bidders shall be returned to them unopened.
- 24.4 No bid may be withdrawn during the interval between the submission of bids and the expiry of the validity of bids specified by the model tender. The withdrawal of a bid by a bidder during this interval may lead to the confiscation of the bid bond in accordance with the provisions of article 17(6) of the General Regulations.

#### E. Opening of envelopes and evaluation of bids

#### Article 25: Opening of envelopes and petitions

- 25.1 The Mezam Tenders Board shall open the envelopes in single or double phases and in the presence of the representatives of bidders who wish to attend at the date, time and address specified in the Special Regulations. Representatives of bidders shall sign a register attesting to their presence.
- 25.2 Firstly, envelopes marked "withdrawal" shall be opened and the contents announced to the hearing of everyone, while the envelope containing the corresponding bid shall be returned to the bidder unopened. Withdrawal shall be allowed only if the corresponding notification contains a valid empowerment of the signatory to request this withdrawal and if this notification is read to the hearing of everyone. Then the envelopes marked "Replacement bid" are opened and announced to the hearing of everyone and the new corresponding bid substituted for the preceding one which will be sent to the bidder concerned unopened. The replacement of the bid shall only be allowed if the corresponding notification contains a valid empowerment of the signatory requesting the replacement and read to the hearing of everyone. Lastly, the envelopes marked "modification" shall be opened and their contents read to the hearing of everyone with the corresponding bid. The modification of the bid shall only be allowed if the corresponding notification contains a valid empowerment of the signatory requesting the modification and read to the hearing of everyone. Only bids which were opened and announced to the hearing of everyone during the opening of bids shall then be evaluated.
- 25.3 All envelopes shall be opened successively and the name of the bidder announced aloud as well as the possible modification mentioned, the price offered, including any rebates [in case of opening of financial bids] and any variant, where necessary, the existence of a guarantee of the bid if it is required and any other details which the Contracting Authority deems useful to be mentioned. Only rebates and variants of bids announced to the hearing of everyone during the opening of bids shall be submitted for evaluation.
- 25.4 Bids (and modifications received in accordance with the provisions of article 24 of the General Regulations) which were not opened and read to the hearing of everyone during the bid-opening session for whatever reason, shall not be submitted for evaluation.
- 25.5 Bid-opening minutes are recorded on the spot mentioning the admissibility of bids, their administrative regularity, prices, rebates and time-limits as well as the composition of the Evaluation sub-committee. A copy of the said minutes to which is attached the attendance sheet is handed over to all the participants at the end of the session.
- 25.6 At the end of each bid-opening session, the chairperson of the Tenders Board immediately hands over to the focal point designated by the body in charge of regulation of Public Contract an initialled copy of the bids presented by bidders.
- 25.7 In case of petition as provided for by the Public Contracts Code, it should be addressed to the Minister Delegate in charge of Public Contracts with a copies to the body in charge of the regulation of Public Contracts, the head of structure to which is attached the Tenders Board concerned.
  - It must reach within a maximum deadline of three (3) working days after the opening of bids in the form of a letter to which is obligatorily attached a sheet of the petition form duly signed by the petitioner and possibly by the chairperson of the Tenders Board.

The Independent Observer attaches to his report the sheet that was handed to him, including any related commentaries or observations.

Article 26: Confidential nature of the procedure

- 26.1 No information relating to the examination, clarification, evaluation and comparison of bids and verification of the qualification of the bidders and the recommendation for the award shall be given to bidders or to any person not concerned with the said procedure as long as the preferred bidder has not been made Public, subject to the disqualification of the bid of the bidder and suspension of the authors from all activities in the domain of Public Contracts.
- 26.2 Any attempt by a bidder to influence the Tenders Board or the Evaluation sub-committee of bids or the Contracting Authority in its award decision may lead to the rejection of his bid.
- 26.3 Notwithstanding the provisions of paragraph 26.2 above, between the opening of bids and the award of the Contract, if a bidder wishes to enter into contact with the Contracting Authority for reasons having to with his bid may do so in writing.

Article 27: Clarifications on the bids and contact with the Contracting Authority

- 27.1 To ease the examination, evaluation and comparison of bids, the Tenders Board may, if it so desires, request any bidder to give clarifications on his bid. This request for clarification and the response thereto are formulated in writing but no change on the amount or content of the bid is sought, offered or authorised, except it is necessary to confirm the correction of calculation errors discovered by the Evaluation Sub-committee during the evaluation in accordance with the provisions of article 30 of the General Regulations.
- 27.2 Subject to the provisions of paragraph 1 above, bidders shall not contact members of the Tenders Board and the Evaluation Sub-committee for questions related to their bids, between the opening of envelopes and the award of the Contract.

Article 28: Determination of compliance of bids

- 28.1 The Evaluation sub-committee shall carry out a detailed examination of bids to determine if they are complete, if the required guarantees are furnished, if the documents were correctly signed and if generally the bids are in proper order.
- 28.2 The Evaluation sub-committee shall determine if the bid is essentially in compliance with the conditions fixed in the Tender File based on the content without recourse to external elements of proof.
- 28.3 A bid that complies with the Tender File shall essentially be a bid that respects all the terms, conditions and specifications of the Tender File, without substantial divergence or reservation. A substantial divergence or reservation is that:
  - i) which substantially limits the scope, quality or realisation of the works;
  - ii) which substantially limits, contrary to the Tender File, the rights of the Contracting Authority or his obligations in relation to the Contract;
  - iii) Whose correction would unjustly affect the competitiveness of the other bidders who presented bids that essentially complied with the Tender File.
- 28.4 If a bid is essentially not in compliance, it shall be rejected by the competent Tenders Board and shall not subsequently be rendered in compliance.
- 28.5 The Contracting Authority reserves the right to accept or reject any modification, divergence or reservation. Modifications, divergences, variants and other factors which are beyond the requirements of the Tender File shall not be considered during the evaluation of bids.

#### Article 29: Qualification of the bidder

The Evaluation sub-committee shall ensure that the successful bidder retained for having submitted a bid substantially in compliance with the provisions of the Tender File, fulfils the qualification criteria stipulated in article 6 of the Special Regulations. It is essential to avoid any arbitrariness in determining qualification.

#### Article 30: Correction of errors

- 30.1 The Evaluation sub-committee shall verify bids considered essentially in compliance with the Tender File to correct the possible calculation errors. The Evaluation sub-committee shall correct the errors in the following manner:
  - (a) where there is an incoherence between the unit price and the total obtained by multiplying the unit price by the quantity, the unit price being authentic, the total price shall be corrected, unless the Evaluation sub-committee judges that it is a gross error of decimal point in the unit price in which case the total price as presented shall be authentic and the unit price corrected.
  - (b) if the total obtained by addition or subtraction of the totals is not exact, the sub totals shall be considered authentic and the total corrected.
  - (c) where there is a difference between the price indicated in letters and in figures, the amount in letters shall be considered authentic, unless the amount is linked to an arithmetical error confirmed by the sub-detail of the said price, in which case the amount in figures shall prevail subject to paragraphs (a) and (b) above.
  - 30.2 The amount featuring in the bid shall be corrected by the Evaluation sub-committee, in accordance with the error correction procedure above and with confirmation by the bidder, the said amount shall be deemed to commit him.
  - 30.3 If the bidder who presented the bid evaluated as the lowest refuses the correction thus carried out, his bid shall be rejected and the bid bond may be seized.

#### Article 31: Conversion into a single currency

- 31.1 To facilitate the evaluation and comparison of bids, the Evaluation sub-committee shall convert the prices of bids expressed in various currencies into those in which the bid is payable in CFA francs.
- 31.2 The conversion shall be done using the selling rate fixed by the Bank of Central African States (BEAC) under the conditions defined by the Special Regulations.

#### Article 32: Evaluation and comparison of financial bids

- 32.1 Only bids considered as being in compliance, as per the provisions of article 28 of the General Regulations, shall be evaluated and compared by the Evaluation sub-committee.
- 32.2 By evaluating the bids, the Evaluation Sub-committee shall determine for each bid the evaluated amount of the bid by rectifying the amount as follows:
  - a) By correcting any possible error in accordance with the provisions of article 30.2 of the General Regulations;
  - b) By excluding projected sums and where necessary provisions for unforeseen occurrences featuring in the bill of quantities and estimates but by adding the amount of works done under State supervision where they are costed in a competitive manner as specified in the Special Regulations.
  - c) By converting into a single currency the amount resulting from the rectifications (a) and (b) above, in accordance with the provisions of article 31(2) of the General Regulations;
  - d) By appropriately adjusting any other modification, divergence or quantifiable reservation on technical or financial basis.

e)By taking into consideration the various execution time-limits proposed by the bidders, if they are authorised by the Special Regulations;

f) If need be, in accordance with the provisions of article 13(2) of the General Regulations and the Special Regulations by applying the rebates offered by the bidder for the award of more than one lot, if this Invitation to Tender is launched simultaneously for several lots.

g) If need be, in accordance with the provisions of article 18(3) of the Special Regulations and the Technical Specifications, the proposed technical variants, if they are permitted, shall be evaluated on their own merit and independently of the fact that the bidder offered or not a price for the technical solution specified by the Contracting Authority in the Special Regulations.

32.3 The estimated effect of price revision formulae featuring in the GAC and SAC applied during the period of execution of the Contract shall not be considered during the evaluation of bids.

32.4 If the bid judged the lowest bid is considered abnormally low or strongly unbalanced in relation to the estimates of the Project Owner for the works to be executed in this Contract, the Tenders Board may, from the sub-details of prices furnished by the bidder for any element or all the elements of the bill of quantities and estimates, verify if these prices are compatible with the construction methods and proposed calendar. In the case where the justifications presented by the bidder are not satisfactory, the Contracting Authority may reject the bid after the technical opinion of the Public Contracts Regulatory Agency.

#### Article 33: Preference granted national bidders

National Contractors shall benefit from a margin of national preference during the evaluation of bids as provided for in the Public Contracts Code.

#### Article 34: Award

- The Contracting Authority shall award the Contract to the bidder whose bid was judged essentially in compliance with the Tender File and who has the required technical and financial capacities to execute the Contract satisfactorily and whose bid was evaluated as the lowest by including, where necessary, proposed rebates
- 34.2 If, according to article 13(2) of the General Regulations, the Invitation to Tender comprises several lots, the lowest bid shall be determined by evaluating this Contract with other lots to be awarded concurrently, by taking into account the rebates offered by the bidders in the case of more than one lot.
- Any award of Contract shall be made to the bidder fulfilling the technical and financial capacities required resulting from the evaluation criteria and presenting the bid evaluated as the lowest.

## Article 35: The right by the Contracting Authority to declare an Invitation to Tender unsuccessful or cancel a procedure

The Contracting Authority reserves the right to cancel a procedure of Invitation to Tender after the authorisation of the Minister Delegate at the Presidency in charge of Public Contracts where the bids have been opened or to declare an Invitation to Tender unsuccessful after the advice of the competent Tenders Board, without any claims being entertained.

#### Article 36: Notification of award of the Contract

Before the expiry of the validity of the bids set in the Special Regulations, the Contracting Authority shall notify the preferred bidder by telecopy confirmed by registered mail or by any other means that his bid was retained. This letter will indicate the amount the Project Owner will pay the Contractor to execute the works and the execution time-limit.

#### Article 37: Publication of results of award and petitions

37.1 The Contracting Authority shall communicate to any bidder or administration concerned, upon request addressed to it within a maximum deadline of five (5) days after Publication of the award

results, the Independent Observer's report as well as the minutes of the award session of the related Contract to which shall be attached the evaluation report of the bids.

- 37.2 The Contracting Authority is bound to communicate the reasons for the rejection of bids of the bidders concerned who so request.
- 37.3 After Publication of the award results, bids that are not withdrawn within fifteen (15) days shall be destroyed, without any claims for compensation being entertained. Only the copy destined for the body in charge of regulation shall be kept.
- 37.4 In case of petition, it should be addressed to the Public Contracts Authority, with copies to the body in charge of the regulation of Public Contracts, the Contracting Authority and the chairperson of the Tenders Board concerned.

It must take place within a maximum deadline of five (5) working days after the Publication of the results.

#### Article 38: Signing of the Contract

- 38.1 After Publication of the results, the draft Contract subscribed by the successful bidder is submitted to the Tenders Board for examination and where applicable, to the Minister in charge of Public Contracts for prior endorsement.
- 38.2 The Contracting Authority has a deadline of seven (7) days to sign the Contract from the date of reception of the draft Contract examined by the competent Tenders Board and subscribed by the successful bidder and where applicable, the endorsement of the Minister in charge of Public Contracts.
- 38.3 The Contract must be notified to the successful bidder within five (5) days of its date of signature.

#### Article 39: Final Bond

- 39.1 Within twenty (20) days of the notification by the Contracting Authority, the Contractor shall furnish the Project Owner with a final bond, to guarantee the complete execution of the works.
- 39.2 The bond whose rate varies between 2 and 5 percent of the amount of the Contract inclusive of all taxes, may be replaced by a guarantee from a banking establishment approved according to the instruments in force with the Project Owner as beneficiary or by a joint or several guarantee.
- 39.3 Small and medium-sized enterprises (SME) constituted of national capital and managed by nationals may, in lieu of the guarantee, provide a statutory lien or a bond issued by a banking establishment or first rate financial institution approved in accordance with the instruments in force.
- 39.4 Failure to produce the final bond within the prescribed time limit shall likely cause the termination of the Contract under the terms laid down in the General Administrative Conditions.

# Document No. 3 SPECIAL REGULATIONS OF THE INVITATION TO TENDER

#### Special regulations of the Invitation to Tender

| References of<br>the General<br>regulations | General  |  |
|---|--|--|
| 1.1   | Definition of works: For The Construction of a Borehole Powered by Solar Energy and Linking to The Bangolan Scan Water System, Babessi Council Area, Ngoketunjia Division of the North West Region.  Name and address of the Contracting Authority: The Lord Mayor, Balikumbat Council |  |
|   | Reference of Invitation to Tender: N° 09/ONIT/MINDDEVEL/BC/BCITB/2025 OF 21/01/2025  |  |
| 1.2   | Execution deadline: THREE MONTHS   |  |
| 2.1   | Source of financing Works which form the subject of this Invitation to Tender shall be financed by the 2025 Public Investment Budget of the Ministry of Water Resources and Energy.  |  |
| 4.1   | List of pre-qualified candidates, not applicable   |  |
| 5.1   | Origin of building materials, equipment, materials, supplies and equipment: The materials will generally be from natural sources in Cameroon.  |  |

#### 6.1 Evaluation criteria

The bids shall be evaluated according to the main criteria as follows:

#### C. Eliminatory criteria

- 1. -Absence or non-conformity of a document in the administrative file;
- 2. -Deadline for delivery higher than prescribed;
- 3. -False declaration or falsified documents;
- 4. -Absence or insufficient bid bond;
- 5. -A bid with the external envelope carrying a sign or mark leading to the identification of the bidder;
- 6. -Incomplete financial file;
- 7. -Change of quantity or unit;
- 8. -Non respect of 20/25 (80%) of essential criteria;

#### D. Essential criteria

- 1- General presentation of the Tender Files;
- 2- Financial capacity;
- 3- References of the company in similar achievements;
- 4- Quality of the personnel;
- 5- Technical organization of the works;
- 6- Safety measures on the site;
- 7- Logistics;
- 8- Attestation and report of site visit;
- 9- Special Technical Clauses initialed in all the pages and signed at the last page;
- 10-Special Administrative Clauses completed and initialed in all the pages and signed at the last page.

The criteria relating to the qualification of candidates could be indicative on the following: The essential criteria are subjected to minima whose detail is given in the Special Tender Regulation (RPAO). This evaluation will be done in a purely positive way (yes) or negative (no) with an acceptable minimum from at least 20/25 (80%) of the essential criteria taken in account.

The Contract will be awarded to the bidder who would have proposed the offer with the lowest amount, in conformity with the regulations of the Tender Documents and having satisfied to 100% of the eliminatory criteria and at least 20/25 (80%) of the essential criteria.

#### ARTICLE 6: Language of the bids:

The offer like any correspondence and all documents concerning the tender, exchanged between the renderer and the Project Owner will be written in French or English. The complementary documents and the printed papers form provided by the Bidder can be written in another language in condition of being accompanied by a precise translation in French or English; in which case and for purposes of interpretation of the offer, the translation will be taken.

#### PRESENTATION OF THE TENDER.

The bids prepared in English or French and in seven (07) copies with one (01) original and six (06) copies marked thus, shall be presented in three (03) volumes as follows:

- A) Administrative Documents
- B) Technical Documents
- C) Financial Documents
- 5.1 External envelope.

Each bidder shall seal these three (03) envelopes (A, B and C) in one common envelope on which shall be written.

<< OPEN NATIONAL INVITATION TO TENDER N° 09/ONIT/MINDDEVEL/BC/BCITB/2025 OF 21/01/2025 FOR THE CONSTRUCTION OF A BOREHOLE POWERED BY SOLAR ENERGY AND LINKING TO THE BANGOLAN SCAN WATER SYSTEM, BABESSI COUNCIL AREA, NGOKETUNJIA DIVISION OF THE NORTH WEST REGION. >>

"TO BE OPENED ONLY DURING THE BID-OPENING SESSION"

N.B: The external envelope should not carry any mark or sign that can lead to the identification of the bidder.

#### 8.2 Internal envelopes

Three (03) internal envelopes must be sealed in an external envelope.

The first internal envelope shall be labeled;

<< ENVELOPE A: ADMINISTRATIVE DOCUMENTS>> and shall contain the administrative documents of the enterprise. These documents shall be original or copies certified by competent authorities not more than three months.

#### ADMINISTIRATIVE DOCUMENTS.

| DOCUMENT<br>N° | DESCRIPTION  |  |
|----------------|--|--|
| A.1            | Declaration of intention to tender stamped with the tariff in force (written by the bidder).   |  |
| A.2            | Certified Copy of the Business Registration, not more than three months old.   |  |
| A.3            | Certificate of non-bankruptcy established by the Court of 1st instance or the Chamber Commerce, Industry and Trade of the place of residence of the bidder, not more than three (03) months. |  |
| A.4            | Attestation of bank account of the bidder, issued by a first rate-bank approved by the Ministry in charge of Finance or by a foreign bank the first order not more than three months.        |  |
| A.5            | Purchase receipt of Tender File issued by Public treasury  |  |
| A.6            | A bid bond of 300,000 (Three Hundred Thousand FCFA) issued by a first rate-bank  |  |

|      | approved by the Ministry in charge of Finance in conformity with COBAC conditions   |  |
|------|---|--|
| A.7  | An attestation of non-exclusion from Public Contracts issued by the Public Contract<br>Regulatory Board (ARMP)  |  |
| A.8  | An Attestation of the National Social Insurance Fund stating that the bidder has met all his obligations vis a vis the Fund; the attestation valid within the given time.                             |  |
| A.9  | Certified Copy of a valid taxpayer's card, delivered by the chief of center of Taxes.   |  |
| A.10 | A Certificate of tax compliance attesting that the bidder has met all the statutory declarations issues of taxes in the current financial year; this certificate should be less than three months old |  |
| A.11 | Plan of localization  |  |
|      |   |  |

## The absence or the nonconformity of the one of these documents will result to the elimination of the offer

The second Internal Envelope shall be labeled <<ENVELOPE B: TECHNICAL DOCUMENT>> and shall contain the following:

|         | EVALUATION GRID OF TECHNICAL BID   |         |      |
|---------|--|---------|------|
| N°      | EVALUATION CRITERIA AND SUB-CRITERIA   | YES     | NO   |
| B)      | ESSENTIAL CRITERIA   | Marie 1 | 1319 |
| B.1     | General presentation of the tender files   |         |      |
|         | ent spirally bound   |         |      |
|         | f content page<br>sheets separation  |         | 197  |
|         | tation of documents in the order given in this tender  |         |      |
| B.2     | LIST OF REFERENCES OF THE ENTERPRISE IN THE SIMILAR JOBS   |         |      |
|         | List of references of the enterprise in similar jobs justified by signed contracts   |         |      |
| B.2.1   | (first and last pages) and minutes of reception or attestation of clearances of works executed.                                      |         |      |
| D.2.1   | Minimum acceptable: 02 Contracts realized in the domain of equipped bore hole  |         |      |
|         | with solar system over the past 05 years   |         |      |
| B.3     | QUALIFICATION AND EXPERIENCE OF SUPERVISORY STAFF  |         |      |
| B.3.1   | 01 Project engineer (at least Bsc in Engineering or equivalent certificate)  |         |      |
| B.3.1.1 | Qualification of the project engineer: (Engineer in Rural Engineering/Electrical/Hydraulics/Exploration Geophysics: at least BAC + 3 |         |      |
| B.3.1.2 | Professional experience of the project engineer ≥ 05 years (signed CV)   |         |      |
| B.3.2   | 02/ Site foreman (Higher technician or equivalent certificate)   |         |      |
| B.3.2.1 | Qualification of the Site foreman: (Higher technician Rural Engineering/Electrical)  |         |      |
| B.3.2.2 | Professional experience of the Site foreman ≥ 03 years (signed CV)   |         |      |
| B.3.3   | 03/ plumber  |         |      |
| B.3.3.1 | Qualification of the plumber (BAC in Plumbing)   |         |      |
| B.3.3.2 | Professional experience of the plumbers ≥ 03 years (signed CV)   |         |      |
| B.4     | TECHNICAL PROPOSALS  |         |      |
| B.4.1   | Organigram of the enterprise   |         |      |
| B.4.2   | Organigram of the project  |         |      |
| B.4.3   | Logical sequence for the execution of the task   |         |      |
| B.4.4   | Quality control method   |         |      |
| B.4.5   | Organization of the works / Methodology  |         |      |

| B.4.6 | Environmental protection measures   |  |
|-------|---|--|
| B.4.7 | Supply of materials   |  |
| B.4.8 | Security and safety at the site   |  |
| 3.4.9 | Duration of execution in respect with the Tender file   |  |
| B.5   | LOGISTICS (Equipment put aside for this project)  |  |
| B.5.1 | Prove of ownership or rental of a boring machine  |  |
| B.5.4 | Prove of ownership or rental of a Hand compactor  |  |
| B.5.6 | Masonry Kit: Wheelbarrows, masonry clamps, masonry harmer 300g, shovel, dig axe, building level, masonry bucket, trowels, calipers etc.   |  |
| B.6   | FINANCIAL CAPACITY  |  |
| B.6.1 | An attestation of financial capacity (solvency) of the enterprise equal or greater than the amount of the project all taxes inclusive, issued by a 1st class bank located in any area in Cameroon and approved by the Ministry of Finance and respect COBAC conditions. |  |
| B.7   | Attestation of site visit signed by an administrative local Authority of project area.  |  |
| B.8   | Comprehensive report of site visit signed by the company administrator and justified by photos  |  |
| B.9   | Special Technical Clauses initialed in all the pages and signed in the last page  |  |
| B.10  | Special Administrative Clauses completed and initialed in all the pages and signed in the last page   |  |

#### **ENVELOPE C- FINANCIAL FILE**

| No.      | DESIGNATION.  |
|----------|---|
| Cl       | A submission letter, signed, dated and stamped.(see ANNEX 3)  |
| C2       | Completed and signed frame work of unit prices.   |
| C2<br>C3 | Signed Bills of quantities and cost estimates indicating the total amount without taxes (HT) and with taxes (TTC) |
| C4       | Sub details of unit prices  |

- The bidders will use for this purpose the documents and models envisaged in the Tender Documents, subject to the provisions of Article 19.2 of the RGAO concerning the other possible forms of bid bond.
- The various parts of the same file must be separated with colour guides from as well in the original as in the copies, so as to facilitate its examination

#### Supply price

#### **ARTICLE 8: Currency of payment**

This National Invitation to Tender is awarded on total and Contractual price, inclusive of all taxes, firm and non-revisable for the whole of the works and the equipment defined in the present Invitation to Tender.

The corresponding amount will be calculated inclusive of all taxes and the prices will be obligatorily expressed in francs CFA.

The unit Schedule price expressed out in figures and letters and in seven (07) copies will be joined to the offer. In the event of error between the prices in figures and letters, the latter will precede and be used as a basis of calculation of the amount of the offer.

The establishment of the prices will be done on the basis of economic condition into force in Republic of Cameroon at the handover date of the offers.

#### **ARTICLE 9: Transport and delivery**

The materials for work must be protected during transportation through packaging whether by air, railway or road according as the case may be. The conditions of storage must be of tropical type.

#### **ARTICLE 10: Guarantee and retention guarantee**

10.1 Provisional guarantee

The amount of the provisional guarantee or guarantee of tender is fixed at 300,000 (Three Hundred Thousand FCFA).

The time of validity of this guarantee is sixty (60) days as from the date of depositing of the offers.

#### 10.2 Final Bond

The final Bond is fixed at two percent (2%) of the initial amount of the services envisaged in the country.

It could be replaced by a guarantee personal and interdependent of a banking house approved by the Ministry of Finances following COBAC conditions.

It will have to be made up in the twenty (20) days following the notification of the signature of the Contract in a bank approved by the Minister in charge of Finances.

#### 10.3 Guarantee Retention

Guarantee Retention of ten percent (10%) will be operated on amount including all taxes of the Contract. The corresponding sum will be paid or the released guarantee, with the final acceptance of work.

#### ARTICLE 11: Period of validity of the offers

The bidder will remain committed to his offer for sixty (60) days as from the handover date of the offers.

If at the end of this period, the Contract were not notified to him, the bidder will be able, either to cancel his offer, or to ask for a new negotiation of the unit prices.

#### ARTICLE 12: A number of copies of the offer which must be filled and sent

The tender, as all the parts accompanying it will have to be given in six (0.7) copies, including one (01) original and five (06) copies. The bidder will present his dossier inside a sealed outer jacket being marked:

<< OPEN NATIONAL INVITATION TO TENDER N° 09/ONIT/MINDDEVEL/BC/BCITB/2025 OF 21/01/2025 FOR THE CONSTRUCTION OF A BOREHOLE POWERED BY SOLAR ENERGY AND LINKING TO THE BANGOLAN SCAN WATER SYSTEM, BABESSI COUNCIL AREA, NGOKETUNJIA DIVISION OF THE NORTH-WEST REGION. >> "TO BE OPENED ONLY DURING THE OPENING SESSION"

#### ARTICLE 13: Date and latest time of deposit of offers

The offers will have to arrive under closed fold and seal latest 04/03/2025 at 10:AM, by mail registered with acknowledgement of delivery or by deposit against receipt to the following address:

THE SERVICE OF THE CONTRACTING AUTHORITY, THE LORD MAYOR, BABESSI COUNCIL Beyond this time no offer will be received nor accepted.

#### **ARTICLE 14: Opening of the tenders**

The opening of the folds will be carried out in the conference room of Babessi Council Internal Tenders' Board on 04/03/2025 as from 11: AM, by the Tender Board sitting in the presence of the duly elected bidders or their representatives and having a good knowledge of the file.

#### **ARTICLE 15: Award of the Contract**

The Tenders Board will propose to the Contracting Authority to award the Contract to the bidder who will have presented the offer with the lowest offer, essentially conforming to the regulations the Tender File, having satisfied to 100% of all the eliminatory criteria and at least 20/25 (80%) of the essential criteria taken into account.

The decision carrying attribution of the Contract will be published by way of press release or any other means of Publication of use in the Administration.

If the Contract passed on the basis of technical alternative suggested by the bidder, the Contracting Authority reserves the right to introduce all the provisions there allowing him to guarantee itself against the real overrun costs of the alternative compared to his estimate of origin. In the absence of these last precise details, any additional charge due to an alternative will be inadmissible.

To this end, it is specified that a bidder cannot claim to be compensated, if it is not taken action on his offer.

The Contracting Authority reserves the right not to take action on an Invitation to Tender, if it did not obtain a proposal which appears acceptable to him.

## Document No. 4 SPECIAL ADMINISTRATIVE CONDITIONS (SAC)

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- Article 1 Subject of the Contract
- Article 2 Award procedure
- Article 3 Definitions and duties (article 2 of GAC supplemented)
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- Article 5 Constituent documents of the Contract (article 4 of GAC)
- Article 6 General applicable instruments
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#### Chapter II: Financial conditions

- Article 11 Guarantees and bonds (articles 29 and 41 of GAC supplemented)
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- Article 42 Provisional acceptance (article 67 of GAC)
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- Article 45 Termination of the Contract (article 74 of GAC)
- Article 46 Force majeure (article 75 of GAC)
- Article 47 Differences and disputes (article 79 of GAC)
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#### Chapter I: General

Article 1: Subject of Contract

The subject of this Contract shall be the for The Construction of a Borehole Powered by Solar Energy and Linking to The Bangolan Scan Water System, Babessi Council Area, Ngoketunjia Division of the North-West Region.

Article 2: Contract award procedure

This Contract shall be awarded by Open National Invitation to Tender No 09/ONIT/MINDDEVEL/BC/BCITB/2025 OF 21/01/2025

#### Article 3: Definitions and duties (article 2 of GAC supplemented)

- 3.1 General definitions (cf. Code)
  - The Contracting Authority shall be the Lord mayor of Babessi Council
    He awards the Contract, ensures the preservation of originals of said Contract
    documents and the transmission of copies to Ministry in charge of Public Contracts and
    to the body in charge of regulation.
  - The Contract Engineer shall be the Divisional Delegate of Water Resources and Energy for Ngoketunjia

He ensures respect of the administrative, technical and financial conditions and Contractual deadlines.

He ensures the interest of the project owner at the definition, preparation, execution and acceptance stages

- The Project Manager shall be the Council Development Officer Babessi hereinafter referred to as the Follow up Engineer.
- The control brigade of MINMAP shall carry out regular unannounced control visit to the site to ensure the respect of this jobbing order.
- The Contractor shall be [to be specified].

3.2 Security

This Contract may be used security subject to any form of transfer of the debt. In this case:

- The authority in charge of ordering payment shall be The Mayor of Babessi Council.
- The authority in charge of the clearance of expenditures shall be the Municipal Finance controller Babessi Council
- The body or official in charge of payment shall be the Babessi Municipal treasury.
- The official competent to furnish information within the context of execution of this Contract shall be the Lord Mayor of Babessi Council.
- 3.3 Duties of the Control Mission, Project Manager
- 3.3.1 Missions [to be completed, where need be]
- 3.3.2 Means put at the disposal of the Control Mission [to be completed where need be].

#### Article 4: Language, applicable law and regulation

- 1.1 The language to be used shall be [English and/or French].
- 1.2 The Contractor shall be bound to observe the law, regulations and ordinances in force in Cameroon both within his own organization and in the execution of the Contract.

If the laws and regulations in force at the date of signature of this Contract are amended after the signature of the Contract, the possible direct resulting costs shall be taken into account without gain or loss for either party.

Article 5: Constituent documents of the Contract (Article 4 of GAC)

The constituent Contractual documents of this Contract are in order of priority: (to be adapted to the nature of the works).

- 1) The tender or commitment letter;
- The bidder's tender and its annexes in all provisions not contrary to the Special Administrative Conditions (GAC) and the Special Technical Conditions (STC) hereunder;
- 3) The Special Administrative Conditions (SAC);
- 4) The Special Technical Conditions (STC);
- 5) The particular elements necessary for the determination of the Contract price, such as, in order of priority: the unit price schedule, the statement of all-in prices, detailed estimates, the breakdown of all-in prices and the sub-details of unit prices;
- 6) Plans, calculation notes, trial documents, geotechnical documents [insert and indicate, where need be, names and references].
- The General Administrative Conditions applicable on Public works Contracts that went into effect by Order No. 033/CAB/PM of 13 February 2007;
- 8) The General Technical Condition(s) applicable on the services forming the subject of the Contract [insert and indicate, where need be, names and references].

#### Article 6: General instruments in force

This Contract shall be governed by the following general instruments [to be adapted according to the case]:

- 1. Framework Law No. 96/12 of 5th August 1996 on the management of the environment;
- 2. The Mining Code;
- 3. Instruments governing the various professional bodies;
- 4. Decree No. 2001/048 of 23<sup>rd</sup> February 2001 relating to the Setting up, Organization and Functioning of the Public Contracts Regulatory Agency
- Decree No. 2003/651/PM of 16th April 2003 to lay down the Procedure for Implementing the Tax and Customs System applicable to Public Contracts;
- Decree No. 2004/275 of 24th September 2004 to institute the Public Contracts Code;
- Decree No. 2012/074 of 8th March 2012 relating to the Creation, Organisation and Functioning of Tenders Boards amended and supplemented by Decree No. 2013/271 of 5 August 2013;
- 8. Decree No. 2012/075 of 8th March 2012 to organise the Ministry in charge of Public Contracts:
- Circular No. 001/CAB/PR of 19th June 2012 relating to the Award and Control of Execution of Public Contracts;
- 10.Letter No; 00908/MINTP/DR of 1997 to publish guidelines for the consideration of environmental impact of road maintenance;
- 11. Circular [to be indicated as applicable] relating to the Execution, and Control of Execution of the Budget of the State, Public Administrative Establishments and Regional and Local Authorities and other bodies receiving government subsidies
- 12. Unified Technical Documents (DTU) for building works;
- 13. Applicable standards;
- 14. Other instruments specific to the domain concerned with the Contract.

#### Article 7: Communication (Articles 6 and 10 supplemented)

- 1.1 All communications within the framework of this Contract shall be written and notifications sent to the following address:
  - a) In the case where the Contractor is the addressee: Sir/Madam..........

    Beyond the time-limit of 15 days fixed in article 6(1) of the GAC to make his domicile known to the Project Owner and Contract Manager, correspondences shall be validly addressed to the [to the specified] council, chief town of the

- region in which the work was done;
- b) In the case where the Project Owner is the addressee: Sir/Madam\_\_\_\_\_ [to be specified] with a copy addressed to the Contracting Authority, Contract Manager, Contract Engineer, Project Manager and where need be, within the same deadline.
- c) In the case where the Contracting Authority is: Sir/Madam [to be specified] with a copy addressed within the same deadline to the Project Owner, Contract Manager, Contract Engineer and Project Manager, where applicable
- 1.2 The Contractor shall address all written notifications or correspondences to the Project Manager with a copy to the Contract Manager.

#### Article 8: Administrative Orders (Article 8 of GAC)

The various Administrative Orders shall be established and notified as follows:

- 8.1 The Administrative Order to start execution of works shall be signed by the Contracting Authority and notified to the Contractor by the Project Owner with a copy to the Contracting Authority, the Contract Manager, Contract Engineer, the Paying Body and the Project Manager, where applicable.
- 8.2 Upon proposal by the Project Owner, Administrative Orders with an incidence on the objective, the amount and execution deadline shall be signed by Contracting Authority and notified by the Project Owner to the Contractor with a copy to the Contracting Authority, the Contract Manager, the Contract Engineer, the Project Manager and the Paying Body. The prior endorsement of the Paying Body shall possibly be required before the signature of those that have an incidence on the amount.
- 8.3 Administrative Orders of a technical nature linked to the normal progress of the work and without financial incidence shall be signed directly by Contract Manager and notified to the Contractor by the Contract Engineer or Project Manager (where applicable) with a copy to the Contracting Authority and Contract Manager.
- 8.4 Administrative Orders serving as warnings shall be signed by the Project Owner and notified to the Contractor by the Contract Manager with a copy to the Contracting Authority, the Contract Engineer and Project Manager.
- 8.5 Administrative Orders for suspension or resumption of work as a result of the weather or any other case of force majeure shall be signed by the Contracting Authority and notified by his services to the Contractor with a copy to the Project Owner, Contract Manager, Contract Engineer and Project Manager.
- 8.6 Administrative Orders prescribing works necessary to remedy disorders which could appear on structures during the guarantee period and not related to normal usage shall be signed by the Contract Manager upon the proposal of the Contract Engineer and notified to the Contractor by the Contract Engineer.
- 8.7 The Contractor has a time-limit of fifteen (15) days to issue reservations on any Administrative Order received. Having reservations shall not free the enterprise of executing the Administrative Orders received.
- 8.8 Concerning Administrative Order signed by the Contracting Authority and notified by the Project Owner, the notification must be done within a maximum of 30 days from the date of transmission by the Contracting Authority to the Project Manager. Beyond this deadline, the Contracting Authority shall establish the default of the Project Owner, take over from him and carry out the said notification.

#### Article 9: Contracts with conditional phases (Article 9 of GAC)

- 9.1 [Specify if the Contract has one or several phases]
  At the end of a phase, the Project Owner shall carry out the acceptance of the works and issue an attestation of proper execution to the Contractor. This attestation shall condition the start of the following conditional phase.
- 9.2 The time-limit granted for notification of the Administrative Order to start execution of a conditional phase shall be five (5) days.

#### Article 10: Contractor's equipment and personnel (Article 15 of GAC supplemented)

- 10.1 Any modification, even partial, made to the technical bid shall only occur after the written approval of the Contract Manager. In case of modification, the Contractor shall have himself replaced by a member of staff of equal competence (qualifications and experiences).
- 10.2 In any case, the lists of supervisory staff to be used shall be subject to the approval of the Project Owner in the days following notification of the Administrative Order to start execution. The Project Manager has 5 (five) days to notify his opinion in writing with a copy sent to the Contract Manager. Beyond this time-limit, the staff list shall be considered as approved.
- 10.3 Any unilateral modification on the supervisory staff made in the technical bid prior to and during the works shall be a reason for termination of the Contract as mentioned in article 45 below or the application of penalties [to be specified where need be].

#### Chapter II: Financial conditions

#### Article 11 Guarantees and bonds (Articles 29 and 41 of GAC)

#### 11.1 Final bond

The final bond shall be set at 2 % of the amount of the Contract, inclusive of all taxes.

It is constituted and transmitted to the Contract Manager within a maximum deadline of twenty (20) days of the notification of the Contract.

The bond shall be returned or the guarantee released within one month following the date of provisional acceptance of the works, following a release issued by the Contracting Authority upon request by the Contractor.

#### 11.2 Performance bond

The retention fund shall be set at 10 % of the amount of the Contract, inclusive of all taxes. The return or release of the retention fund or security shall be done within one month after final acceptance by release issued by the Contracting Authority upon request by the Contractor.

#### 11.3 Guarantee of start-off advance

[Specify, if need be, the rates (20% maximum of the amount of the Contract inclusive of all taxes avaranteed at 100%) and conditions for the return of the guarantee]

#### Article 12: Amount of the Contract (Articles 18 and 19 of GAC supplemented)

| The amount of this Contract as indicated by | the attached [detail or estimates] is (in figures) |
|---|--|
| (in letters) CFA francs Inclusive of All    | Taxes; that is:                                    |
| - Amount exclusive of VAT:                  | () CFA F   |
| - Amount of VAT:(                           | ) CFA F.   |

- Amount of TSR and/or \_\_\_\_\_CFA F
- Net to be paid= EVAT-TSR and/or AIR

#### Article 13: Place and method of payment

The Project Owner shall release the sums due in the following manner:

- a. For payments in CFA francs (amount in figures and letters exclusive of taxes) by credit to account No.\_\_\_\_\_ opened in the name of the Contractor in the
- b. For payments in foreign currencies (amount in figures and letters exclusive of taxes) by credit to account No. \_\_\_\_\_ opened in the name of the Contractor in bank.

#### Article 14: Price variation (Article 20 of GAC)

14.1 Prices shall be firm.

- a. Payments on account made to the Contractor as advances shall not be revisable.
- b. Revision shall be "frozen" upon expiry of the Contractual time-limit, except in the case of price reductions.
- 14.2 Price updating modalities (not applicable)

# Article 15: Price revision formulae (article 21 of GAC)

(not applicable)

# Article 16: Price updating formulae (article 21 of the GAC)

(not applicable)

#### Article 17: Works under State supervision (Article 22 of GAC supplemented)

- 17.1 The percentage of works under State supervision shall be [must not exceed 2 %] of the amount of the Contract and its additional clauses, where applicable.
- 17.2In the case where the Contractor were invited to execute works under State supervision, the submitted and duly justified expenditures shall be reimbursed to him under the following conditions:
  - The quantities considered shall be the hours used or the quantities of building materials and materials used that was the subject of joint job cost sheets;
  - The remunerations and salaries effectively paid to local labour shall be increased by forty percent (40 %) to take account of social benefits;
  - The hours put in by the heavy equipment shall be counted at the rate featuring in the subdetail of prices;
  - Building materials and materials shall be reimbursed at cost price duly justified at the place of use, marked up by ten percent for loss, stocking and handling;
  - The amount for services thus calculated, including the hours put by heavy equipment shall be marked up by 25 % to take into account the overheads, profits and the Contractor's unforeseens.

#### Article 18: Evaluation of works (article 23 of the GAC)

This Contract is at [unit price, all-in price or unit and all-in price]

#### Article 19: Evaluation of supplies (article 24 of the GAC supplemented)

- 19.1 [indicate, where applicable, the modalities for payment of supplies].
- 19.2 No security shall be requested for payments on account on supplies.

Article 20: Advances (article 28 of the GAC)

- 20.1 The Contracting Authority may grant a start-off advance equal to 20 % of the amount of the Contract.
- 20.2 This advance whose value cannot exceed twenty (20) percent of the initial amount inclusive of all taxes shall be guaranteed at one hundred (100) percent by a banking establishment governed by Cameroon law or a first-rate financial institution in accordance with the instruments in force and reimbursed by deduction of the payments on accounts to be paid to the Contractor during the execution of the Contract according to the modalities laid down in the Special Administrative Conditions.
- 20.3 The total amount of the advance must be reimbursed not later than when the value in basic price of the works reaches eighty (80) percent of the amount of the Contract.
- 20.4 As the reimbursement advances, the Project Owner shall issue the release of the corresponding part of the guarantee upon the express request by the Contractor.
- 20.5 The possibility of granting start-off advance or advance for supplies must be expressly stipulated in the Tender File.

# Article 21: Payment for works (articles 26, 27 and 30 of the GAC supplemented) 21.1 Establishment of works executed

Before the 30th of each month, the Contractor and the Project Manager shall jointly establish a job cost sheet which summarises and fixes the quantities executed and established for each item on the schedule during the month and capable of giving entitlement to payment.

21.2 Monthly detailed account

No later than the fifth (5th) of the month following the month of the services, the Contractor shall hand over to the Project Manager two draft provisional monthly detailed accounts in seven copies (one detailed account exclusive of VAT and the other inclusive of taxes), according to the agreed model and establishing the total amount of the sums to which he may lay claim as a result of the execution of the Contract since the start of the Contract.

Only the detailed account exclusive of VAT shall be paid to the Contractor. The detailed account of the amount of the taxes shall be the subject of an entry into the budgets of the Ministry in charge of Finance

Only the amount exclusive of VAT shall be paid to the Contractor as follows:

- [100-1.1 and/or (7.5 or 15%)] paid directly into the account of the Contractor;
- 2.2 Or 5.5 % paid to the Public treasury as AIR due by the Contractor.
- 7.5% or 15% paid into the Public treasury as TSR due by the Contractor.

The Project Manager has a time-limit of seven (7) days to forward to the Contract Manager the detailed accounts he has approved.

The Contract Engineer has a maximum time-limit of twenty-one (21) days to forward the detailed accounts he approved such that they are in his possession not later than the twelfth of the month.

The Contract Manager has a deadline of fourteen (14) days maximum to sign the detailed accounts.

Payments shall be done by\_\_\_\_\_ within a maximum deadline of \_\_\_\_\_ calendar days from the date of submission of the approved detailed accounts.

21.3 Detailed account of start-off account (if applicable).

Article 22: Interest on overdue payments (Article 31 of the GAC)

Possible interests on overdue payments are paid by statement of sums due in accordance with article 88 of Decree No. 2004/275 of 24 September 2004 to institute the Public Contracts Code.

#### Article 23: Penalties (Article 32 of the GAC supplemented)

#### A. Penalties for delay

- 23.1 The amount set for penalties for delays shall be set as follows:
  - a) One two thousandth (1/2000th) of the initial Contract amount all taxes inclusive per calendar day of delay from the first to the 30th day beyond the Contractual time-limit;
  - b) One thousandth (1/1000th) of the initial amount of the Contract inclusive of all taxes per calendar day beyond the 30th day.
- 23.2The cumulated amounts of penalties for delay shall be limited to ten percent (10 %) of the initial Contract inclusive of all taxes.

#### B. Specific penalties [amount to be indicated]

- 23.3 Independently of penalties for overrun of Contractual time-limit, the Contractor shall be liable for the following special penalties for the non-observation of the provisions of the Contract, especially:
  - Late submission of final bond;
  - Late submission of insurances;
  - Late submission of the draft execution schedule if the lateness is caused by the Contractor.

#### Article 24: Payment in case of a group of enterprises (article 33 of the GAC)

- In the case of a group of enterprises, indicate the method of payment of co- and sub-Contractors, where need be.
- 2. Indicate the method of payment of sub-Contractors, where need be.

#### Article 25: Final detailed account (article 34 of the GAC)

25.1 [Indicate the time-limit available to the Contractor to forward the draft to the Project Manager, after the date of provisional acceptance of the works (maximum 1 month)].

After completion of the works and within a maximum time-limit of fourteen (14) days after the date of provisional acceptance, the Contractor shall establish, based on joint reports, the draft final detailed account of works executed and which detailed account summarises the total sums to which the Contractor may be entitled as a result of the execution of the whole Contract.

- 25.2 The Contract Manager has up to thirty (30) days to notify the corrected and approved draft to the Project Manager.
- 25.3 The Contractor has up to thirty (30) days to return the signed final detailed account.

## Article 26: General and final detailed account (article 35 of the GAC)

26.1 The Contract Manager or the Project Manager has up to thirty (30) days to establish the general detailed account and forward to the Contractor after final acceptance.

At the end of the guarantee period which results in the final acceptance of the works, the Contract Manager draws up the general and final detailed accounts of the Contract which he has had signed jointly by the Contractor and the Contracting Authority. This detailed account includes:

- the final detailed account,
- the balance
- the summary of monthly payments on account.

The signing of the general and final detailed account without reservation by the Contractor definitely binds the two parties, puts an end to the Contract, except with regard to interest on overdue payments.

26.2 The Contractor has up to thirty (30) days to return the signed final detailed account.

#### Article 27: Tax and customs regulations (article 36 of the GAC)

Decree No. 2003/651/PM of 16 April 2003 lays down the Terms and Conditions for Implementing the Tax regulations and Customs Procedures applicable to Public Contracts. The taxes applicable to this Contract include notably:

- Taxes and dues relating to industrial and commercial profits, including the IAR which is a deduction on company taxes;
- Registration dues in accordance with the Tax Code;
- Dues and taxes attached to the execution of services provided for in the Contract;
  - Duties and taxes of entry into Cameroonian territory (customs duties, VAT, computer tax);
  - Council dues and taxes;
  - Dues and taxes relating to the extraction of building materials and water.

These elements must be included in the costs which the undertaking imputes on its running costs and constitute one of the elements of the sub-details of prices exclusive of taxes.

All taxes inclusive prices mean VAT included.

#### Article 28: Stamp duty and registration of Contracts (article 37 of GAC)

Seven (7) original copies of the Contract shall be stamped by and at the cost of the Contractor, in accordance with the applicable regulations.

#### Chapter III: Execution of works

#### Article 29: Commencement of work:

Before the commencement of work the Contractor must be installed on the site by the following:

- The Authorizing Officer;
- \* The Control Engineer, DD MINEE;
- The Divisional Delegate of MINMAP;
- The Divisional Delegate of MINEPAT;
- Project Manager;
- The Divisional Delegate of MINDDEVEL;
- The Representative of beneficiary population.

#### Article 30: Nature of the works (article 46 of GAC)

The works shall include especially: (position or volume of works) (To be specified cf. Special Technical Conditions)

#### Article 31: Roles and responsibilities of the Project Owner (GAC supplemented)

30.1 The Project Owner shall be bound to furnish the Contractor with information necessary for the execution of his mission and to guarantee, at the cost of the Contractor, access to sites of projects.

30.2 The Project Owner shall ensure the Contractor of protection against threats, insults, violence, assault and battery, slander or defamation of which he could be victim by reason of or during the exercise of his mission.

#### Article 32: Execution time-limit of the Contract (article 38 of the GAC)

- 31.1 The time-limit for the execution of the works forming the subject of this Contract shall be **ninety** (90) days.
- 31.2 This time-limit shall run from the date of notification of the Administrative Order to commence execution of the works [or that fixed in this Administrative Order- to be specified].

#### Article 33: Roles and responsibilities of the Contractor (article 40 of the CAG)

The detailed and general plan of progress of the works shall be communicated to the Project Manager in five (05) copies at the beginning of each.

#### Article 34: Provision of documents and site (article 42 of the GAC)

A reproducible copy of the plans featuring in the Tender File shall be submitted by the Contract Manager.

The Project Owner shall make available the site and access ways to the Contractor at the appropriate time as the works progress.

#### Article 35: Insurance of structures and civil liabilities (article 45 of GAC)

The following insurance policies are required within the scope of this Contract in the minimum amounts indicated hereafter within fifteen (15) days of the notification of the Contract (to be adapted):

- Liability insurance, business manager;
- Comprehensive insurance of the site;
- Insurance covering its ten-year obligation, where applicable.

#### Article 36: Documents to be furnished by the Contractor (Article 49 of the GAC supplemented)

[Specify the deadlines for the transmission of documents as well as those of approval by persons to be designated]

#### 36.1 Programme of works, Quality Assurance Plan and others (to be specified).

a) Within a minimum deadline of [fifteen (15) days] from the date of notification of the Administrative Order to commence execution, the Contractor shall submit in [six (6)] copies for the approval of [Contract Manager after the endorsement of the Project Engineer] the execution programme of the works, his supply calendar, his draft Quality Assurance Plan and the Environment Management Plan, where applicable.

This programme shall be exclusively presented according to the furnished models.

Two (2) copies of these documents will be returned to him within a deadline of fifteen (15) days from the date of reception with:

- Either the indication "GOOD FOR EXECUTION";
- Or the indication of their rejection including the reasons for the said rejection.

The Contractor has eight (8) days to present a new draft. The Contract Manager or the Project Manager then has a deadline of five (5) days to give his approval or possibly make comments. Delay in approving the draft execution schedule shall stay the execution deadline.

The approval given by the Contract Manager or Project Manager does not in any way release the Contractor of his responsibilities. Meanwhile, works executed before the approval of the programme shall neither be ascertained nor paid for. The updated and approved schedule will become the Contractual schedule.

The Contractor shall constantly update on site, a schedule that will take account of real progress of the site. Significant modifications may only be made on the Contractual programme upon receiving the approval of the Project Manager. After approval of the execution schedule by the Contract Manager, the latter shall transmit it within five (5) days to the Contracting Authority without staying its execution. However, if important modifications alter the objective of the Contract or the nature of the works, the

Contracting Authority shall return the execution schedule accompanied by reservations to be lifted within fifteen (15) days of the date of reception.

- The Environment Management Plan should bring out notably the choice technical conditions of the site and basic life, conditions of the backfill of the extraction sites and conditions for reinstating the works and installation sites.
- c) The Contractor shall indicate in this schedule the equipment and methods which he intends to use as well as the personnel he intends to employ.
- d) The approval granted by the Contract Manager or Project Manager shall in no way diminish the responsibility of the Contractor with regard to the harmful consequences which their implementation may cause both towards third parties and the respect of clauses of the Contract.

#### 36.2 **Execution draft**

- a) The execution plan documents (calculations and drawings) necessary for the realisation of all the parts of the structure must be submitted for the endorsement of the [Contract Manager or Project Manager] at most fifteen (15) days prior to the date provided for the commencement of execution of the corresponding part of the structure.
- b) The [Contract Manager or Project Manager] has a deadline of [five (05) days] to examine and make known his observations. The Contractor then has a deadline of [04) four days] to present a new file including the said observations.
- In case of the non-observance of the approval deadlines of the above documents by the 35.3 Administration, these documents shall be deemed to have been approved.

# Article 37: Organisation and safety of sites (article 50 of the GAC)

- Signboards at the beginning and end of each section must be placed within a maximum deadline of fifteen days after the notification of the Administrative Order to commence work.
- 37.2 The services to inform in case of interruption of traffic or along the deviated itinerary: [To be specified in accordance with article 50(2) of the GAC].
  - Indicate the special measures demanded of the Contractor, other than those provided 37.3 for in the GAC, for rules of hygiene and safety and for circulation around or in the site.

#### Article 38: Implantation of structures

The Project Manager shall notify within [five] days following the date of notification of the Administrative Order to commence work, the basic points and levels of the project.

#### Article 39: Sub-Contracting (article 54 of the GAC)

The part of the works to be sub-Contracted shall be [specify] % of the initial amount of the Contract and its additional clauses (the ceiling is 30 %).

#### Article 40: Site laboratory and trials (article 55 of GAC)

- Indicate if necessary the modalities for carrying out the trials and geotechnical studies provided for in the Special Technical Conditions.
- The Contract Manager has a deadline of three days to approve the Contractor's personnel 40.2 and laboratory as soon as the request is made.

# Article 41: Site logbook (article 56 of the GAC supplemented)

The Site logbook must be systematically jointly signed by the Project Manager or Engineer, where need be and the Contractor's representative each day.

41.2 It is a joint document in a single copy. Its pages must be numbered and initialled. No page should be removed. The erased or cancelled parts must be mentioned on the margin for validation.

# Article 42: Use of explosives (article 60 of the GAC)

#### Chapter IV: Acceptance

#### Article 43: PROVISIONAL ACCEPTANCE 43.1 PRE- ACCEPTANCE OPERATIONS

Before the acceptance of the works the Contractor shall ask in writing to the Contract Engineer, to organize a technical visit for pre-acceptance. This visit shall include the following operations.

- Qualitative and quantitative evaluations of the different works that have been executed.
- > Findings and statement of the unexecuted task envisaged in the present jobbing order.
- > Findings relative to the completion of the work
- > Findings on the quantity of works that have been effectively realized

These operations shall be subject to a site report drawn up on the field, signed by the following.

- -Contract Engineer,
- -Chief of Control Brigade MINMAP,
- -Contractor.

During this pre-reception, the Engineer shall eventually specify the reserves to be lifted and the corresponding works to be effected before the reception. The Engineer shall fix the reception date in collaboration with the chief of service for the Contract.

#### 43.2 Acceptance

The commission shall examine the report of the pre-acceptance and shall proceed to the acceptance. An acceptance report (process - verbal) of the works shall be prepared by the Engineer and sign by all the commission members.

#### Article 44: GUARANTEE PERIOD.

The guarantee period is one (01) year from the date of the provisional acceptance.

# Article 45: Final acceptance (article 72 of the GAC)

- 45.1 Final acceptance shall take place within a maximum deadline of [fifteen (15) days] from the date of expiry of the guarantee.
- 45.2 The Project Manager [shall] be member of the commission.

The procedure for final acceptance shall be the same as for provisional acceptance

#### Chapter V: Sundry provisions

#### Article 46: Termination of the Contract (article 74 of the GAC)

The Contract may be terminated as provided for in Part III Paragraph IV of Decree No. 2004/275 of 24 September 2004 and equally under the conditions laid down in articles 74, 75 and 76 of the GAC especially in one of the following cases:

- Delay of more than fifteen (15) calendar days in the execution of an Administrative Order or unjustified stoppage of more than seven (7) calendar days;
- Delay in work resulting in penalties of more than 10 % of the amount of the works;
- Refusal to repeat poorly executed works;
- Default by the Contractor;
- Persistent non-payment for services.

#### Article 47: Case of force majeure (article 75 of the GAC)

If the Contractor were to raise the issue of force majeure, the thresholds below which claims shall not be admitted are:

- Rainfall: 200 millimetres in 24 hours;
- Wind: 40 metres per second;
- Flood: decennial flood frequency.

No Complain against insecurity in the project site.

#### Article 48: Disagreements and disputes (article 79 of the GAC)

Disagreements and disputes resulting from the execution of this Contract may be settled amicably. Where no amicable solution can be found for a disagreement, it is brought before the competent Cameroonian jurisdiction, subject to the following provisions: [to be filled, where need be].

#### Article 49: Production and dissemination of this Contract

[Twenty (20)] copies of this Contract shall be produced at the cost of the Contractor and furnished to the Contract Manager.

#### Article 50 and last: Entry into force of the Contract

This Contract shall be final only upon its signature by the Contracting Authority. It shall enter into force as soon as it is notified to the Contractor by the Contracting Authority.

# Document No. 5 SPECIAL TECHNICAL CONDITIONS (STC)

#### SPECIAL TECHNICAL CLAUSES

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#### INTRODUCTION

For the Construction of a Borehole Powered by Solar Energy and Linking to The Bangolan Scan Water System, Babessi Council Area, Ngoketunjia Division of the North West Region and the manner in which these works shall be carried out. So the Contractor is expected to read these specifications critically and identify all the articles that are applicable to his job.

# CHAPTER 1: GENERAL INFORMATION

# ARTICLE 1: VOLUME OF WORK TO BE EXECUTED.

In each case, the volume of work to be executed is indicated by the bill of quantities, network maps and/or plans provided for each project. The various works to be executed shall conform to the relevant terms of the technical specifications given herein below.

## ARTICLE 2: GENERAL INSTRUCTIONS

It should be understood that the provision of a bill of quantities for any project does not absolve the potential Contractor of the necessity to affect a well-planned site visit, at his own expense, to gain complete knowledge of the conditions prevailing on the terrain. This knowledge shall come in handy when preparing the List of Tasks and the Unit Price Schedule. Potential Contractors (or Bidders) shall provide a detailed and sequenced List of Tasks to be effected on each component of the project. Within fifteen (15) days from the date of notification to start work, the contractor shall provide the Supervising Engineer with:

- -A detailed plan of the work, showing the scheduling of the various works to be executed in
- -Detailed technical drawing of the works to be realized
- -A manpower deployment plan
- -A schedule of the delivery of materials to the project site, showing possible delays
- -Failure to forward the foregoing documents shall engender the postponement of the reception of project materials, which could result in a punishable overall delay in the execution of the project.

No material shall be used that has not been checked for conformity with the technical specifications by the Supervising Engineer.

The Supervising Engineer reserves the right to modify the plans and Work schedule provided by the Contractor, which modification shall first be submitted to the Delegated Contracting Authority for approval. Under exceptional circumstances, the Supervising Engineer may suggest modifications to the technical specifications for any component of a project to the Delegated Contracting Authority, while making sure that the overall cost of the project stays within the limits of the financial bid of the Contractor.

Any modification must be done in writing, with sufficient justification. For this purpose, a numbered page book (the project log book) shall be kept on site in which the Supervising Engineer shall write his approved instructions. Both the Contractor, or his representative, and the Supervising Engineer shall initial every page of the project logbook

It is therefore obligatory for the contractor to execute the works in conformity with:

- -The Bills of Quantities and Estimates,
- -The Special Administrative Clauses
- -The Special Technical Clauses stated herein,
- -Any other special rules and regulations that may be applicable to his job.
- -The work schedule.
- -The detailed technical drawings.

Subject to any approved modifications indicated in the project log book by the Supervising Engineer.

The Contractor shall take note of any omission or discrepancies that may exist in the three documents mentioned in the preceding paragraph, which omission or discrepancies could fundamentally affect the technical or aesthetic quality of the works executed to his detriment, and call the attention of the Supervisory Engineer who shall remain at his disposal of the Contractor for necessary information and inquiries through the duration of the project.

In this regard, the Contractor shall not absolve himself of the responsibility for poor quality work by citing imprecision, omissions or discrepancies in the technical specifications or modifications thereof indicated in the project log book by the Supervising Engineer.

Any works effected without regard for the foregoing instructions or provisions shall be demolished at the expense of the Contractor

# CHAPTER II: ORIGIN AND QUALITY OF GEOMATERIALS AND CEMENT

# ARTICLE 3: QUALITY AND QUANTITY OF GEOMATERIALS

The Contractor shall supply all the sand, stones and gravel that may be required for the execution of any component of a project. He shall also be responsible for the excavation and backfilling of the pipeline under the supervision of the Engineer. In that regard, it is obligatory for the potential Contractor (or bidder) to visit the project site, at his own expense, before preparing his bids, in order to verify whether available geo-material is of good quality and of sufficient quantity. He shall make any reservations concerning geo-materials in his bid.

#### ARTICLE 4: ORIGIN AND QUALITY OF SAND

The nature and origin of sand remain subject to the approval of the Supervising Engineer. Sand shall be obtained either from rivers or through crushing of rocks. The sand shall be of high quality. It shall be crunchy, stable, clean and shall be free of dust particles, schistose, gypseous or clayey debris and organic matter. It shall contain neither sulphur compounds no substances that can react with cement or metallic reinforcements. The sand component shall be more than 80% and the very fine constituents, with a dimension not exceeding eighty (80) microns that can be eliminated by settling, should be less than four percent (4%). No grain of sand should have a dimension greater than four (4) millimeters. If deemed necessary by the Supervising Engineer, the sand shall be sieved and washed thoroughly before use.

Moreover, filter grade sand shall have a grain size ranging from 0.8mm to 1.2mm inclusive. Furthermore, it shall be fried in order to eliminate algae zygospores, bacteria and/or bacteria spores, fungi and/or fungal hyphae.

# ARTICLE 5: ORIGIN AND QUALITY OF GRAVEL.

Gravel shall be obtained from deposits or quarries chosen by the contractor and approved by the Supervising Engineer. It shall be clean, without an excess of flat elongated pieces, dust or impurities. Constituents that can be eliminated through settling should be less than 2%. Its grading should be suited to its use. If deemed necessary by the Supervising Engineer, it shall be washed before use.

# ARTICLE 6: ORIGIN AND QUALITY OF STONES

Stones shall be obtained from deposits or quarries chosen by the Contractor and approved by the Supervising Engineer. No stone shall have a dimension less than twenty (20) centimeters. Basalts stones, commonly called black stones, are highly recommended, or else stones of other quality, such as un-weathered granites, rhyolites, ignimbrites, etc, duly tested and approved by the Supervising Engineer may also be used.

# ARTICLE 7: ORIGIN AND QUALITY OF CEMEMT

Cement shall be of the CPA 325 class and shall be obtained from an approved factory.

# CHAPTER III: CONCRETE WORKS

# ARTICLE 8: PREPARATION OF CONCRETE

Concrete works shall be of three (3) kinds:

- Mass concrete for foundations works; it shall be a mixture of 250kg of cement per m3 of sand and of appropriate thickness.
- ii) Re-enforced concrete for floor and roof slabs and slab covers for storage tanks, valve chambers and interruption chambers; it shall be a mixture of 350kg of cement per m3 of sand and shall be of appropriate thickness.
- iii) Mass concrete for catchment's works; it shall be a mixture of 400kg of cement per m3 of sand.

# CHAPTER IV: METHOD OF EXECUTION

# ARTICLE 9: GENERAL INFORMATION 9.1 SECURITY AT THE WORK SITE

The contractor shall place at the entrance to work site signboards in bold letters indicating that work is underway and prohibiting the public and unauthorized persons from entering the work site. He shall be responsible for any accident that may occur on the work site or may be suffered by a third party, his staff and employees or officials of the Administration as a result of their presence on the work site. Organization of work and security on the work site shall therefore be the sole responsibility of the Contractor. Furthermore, the Contractor shall be bound by the labour legislation in Cameroon vis-a vis his workers and the Administration. Moreover, his insurance policy shall cover any damages he could cause to any one during the execution of the job.

#### 9.2 TRAFFIC

The Contractor shall be responsible for ensuring that traffic is not obstructed on the entire stretch of his work site throughout the period of work, right up till provisional reception. No obstruction of traffic shall be allowed for more than two hours. Maintenance of traffic flow shall be the responsibility of the Contractor. In case of any breach of contract in this matter, the Supervising Engineer may bring in a third party to correct any shortcomings that may be impeding the traffic flow, and related expenses shall be borne by the Contractor.

Where interference of the traffic flow for a given period is inevitable, the Supervising Engineer shall be informed of the situation at least 7 days in advance, so that he can seek the opinion of local Administrative authorities and get everything arranged beforehand.

In case a deviation has to be used, the contractor shall submit to the Supervising Engineer for approval after consultation with local administrative authorities, the deviation route and his plan for maintaining the deviation throughout the duration of the works that have necessitated the deviation.

#### ARTICLE 10: STONE MASONRY

Stone masonry shall be aesthetical and in accordance with structure type and civil engineering rules.

Binding mortar shall be a mixture of 400kg of cement per m3 of sand, no grain of which shall have a dimension exceeding 4mm.

Mortar containing a mixture of 450kg of cement per m3 of sand shall be used for the finishing of the external joints of non-visible walls of stone masonry

Mortar consisting of a mixture of 500kg of cement per m3 of sand, to which shall be added a quantity of SIKA N° 1 recommended by the manufacturer and approved by the Supervising Engineer, shall be used for waterproofing the interior surfaces of water-retaining structures (storage tanks, interruption chambers, sedimentation basin, filters, etc).

## ARTICLE 11: POINTING AND PLASTERING

#### 11.1 POINTING

The joints of all external walls of stone masonry that are visible shall be carefully pointed to give them an aesthetic look. Mortar containing 600kg of cement per m3 of sand shall be used for pointing with a cement paste (1:0) finish

#### 11.2 PLASTERING

Plastering of surfaces in contact with water shall comprise pointing of the mortar joints followed by a 1cm thick layer of spatter dash 1:2 (m625). This shall then be followed by the application of a rendering coat of 2cm thick 1:4 (m300) mixtures and a setting coat 2cm thick 1:2 (m625). The walls shall then be finished with cement paste. Plastering of surfaces not in contact with water, such as chambers for air valves, control valves and washouts shall consist of 1 coat of plaster 1cm thick and a mixture of 1:3 (m400)

#### ARTICLE 12: PLUMBING WORKS

#### By pluming works include:

Laying of pipes in the trenches (i

- Construction and installation of chambers for air valves, washouts and control valves ii)
- Installation of branch lines right up to the last plastic before the standpipes. iii)

#### 12.1 PIPE SPECIFICATIONS

Pipes should meet the physical characteristics presented in table1 below:

Table 1: Physical Characteristics of pipes

| Internal Ø<br>& external | Т       | hickness (m | m)      | Socket<br>length | Nominal service    | Length of pipe (m) |
|--------------------------|---------|-------------|---------|------------------|--------------------|--------------------|
| Ø (mm)                   | Minimum | Nominal     | Maximum | (mm)             | pressure<br>(bars) |                    |
| 21x25                    | 1.9     | 2.0         | 2.3     | 28               | 10                 | 6                  |
| 28x32                    | 1.9     | 2.0         | 2.3     | 32               | 6                  | 6                  |
| 26.8x32                  | 2.4     | 2.6         | 2.9     | 32               | 10                 | 6                  |
| 35x40                    | 2.3     | 2.5         | 2.8     | 40               | 6                  | 6                  |
| 33.6x40                  | 3.0     | 3.2         | 3.5     | 40               | 10                 | 6                  |

#### TOLERANCES

Ovalization: ± 1mm

Length of pipe: ± 1% =>±6cm

Socket length: ± 0.6mm

#### 12.1.1 CONTROL TESTS FOR PIPES

#### i) Length

The tolerance for pipe lengths shall be  $\pm$  1% ( $\pm$  6cm). For every 100 pipes, if the number of pipes not respecting this tolerance is less than 3 i.e. 3%, then the whole lot shall be considered okay, otherwise the Supervising Engineer shall request that as many pipes as possible be tested in the lot.

#### ii) External Diameter

The tolerance shall be  $\pm$  0.3mm for pipes of external diameters between 25mm and 50mm, and  $\pm$ 0.4mm for pipes between 63mm and 75mm in external diameter. Before reception, the Supervising Engineer shall verify the external diameters of 15 pipes for every 300 pipes. If 6 or more pipes fail to meet the tolerances prescribed above, he shall reserve the right to reject the whole lot. If 5 pipes fail to meet the tolerance stipulated above. 15 other pipes shall be selected at random from the same lot and verified. If the same results are obtained for 5 pipes, the whole lot shall be rejected.

#### iii) Thickness

Thickness verification should adhere to the specifications presented in table II below.

Table II: Thickness Verification

| No. of pipes in the | No. of pipes randomly     | No of b                 | oad pipes X           |
|---------------------|---------------------------|-------------------------|-----------------------|
| lot                 | selected for verification | Lot accepted if X max = | Lot rejected if Xmin= |
| 100-199             | 10                        | 2                       | 3                     |
| 200-299             | 15                        | 3                       | 4                     |
| 300-499             | 20                        | 3                       | 4                     |
| 500-899             | 25                        | 5                       | 6                     |
| 899-1300            | 30                        | 6                       | 7                     |
| 1300-3200           | 40                        | 8                       | 9                     |

The Supervising Engineer shall carry out thickness verification in accordance with table II above

#### iv) Socket length

The socket length shall be verified according to agreed norms. The value obtained should have the theoretical value of the diameter of the tube plus 1.3mm. The tolerance shall be 0.6mm

#### v) Shrinkage cracks

Shrinkage cracks tests should be carried out according to agreed methods by the Supervising Engineer on a 15-30cm long sample. No shrinkage cracks should occur if the pipe is at 90° to its horizontal axis. If this occurs for 15 samples representing a lot of 100 pipes, the lot shall be rejected.

#### vi) Internal Pressure

Pipe samples shall be subjected to 1.5 times the service pressure for duration of one hour. If one out of every five samples ruptures, another set of five shall be selected for retest. If the second set respects the specified relation with the service pressure, the set shall be considered satisfactory. Otherwise, either necessary adjustments shall be carried out to meet the required specifications. or the lot shall be rejected.

#### vii) Impact

This test shall be carried out on three samples, one from each extremity and the third, from the center. all three, one meter long. Perpendicular masses shall be dropped from a height of one meter onto the samples as shown in table III.

Table III: Impact Test Schedule

| Pipe diameter | Mass (kg) |
|---------------|-----------|
| 25            | 1         |
| 32            | 1         |
| 40            | 1         |
| 50            | 3.5       |
| 63            | 5         |
| 75            | 7.5       |
| 90            | 7.5       |

The pipes shall be accepted if, and only if, the percentage of broken pipes in the tested samples does not exceed 40%

#### viii) Labels

The Contractor shall ensure that all pipes for this project are labeled <H>. The Supervising Engineer shall reject any pipe not labeled as such

The Contractor shall furnish the Supervising Engineer with information (name, address, phone, etc) on the factory being used to procure pipes for any project.

The Contractor shall present to the Supervising Engineer a guarantee certificate from the factory of origin ascertaining that the pipes meet the required standards as described in the forgoing sections. The Contractor shall arrange for free access to the factory for the Supervising Engineer to enable him request, as required, for all factory tests described in the aforementioned sections to be carried out by the manufacturer.

The performance guarantee of works shall cover all defects in pipes, their handling and workmanship.

#### FITTINGS SPECIFICATIONS

The fittings required for these works, are presented in Table IV below. Contractors are required to strictly respect these specifications.

All fittings shall be approved by the Supervising Engineer before use. All fittings not conforming to those specified in Table IV shall be rejected. The performance guarantee of work shall cover all defects in fittings, their handling and workmanship.

#### TABLE IV: SPECIFICATIONS FOR FITTINGS

| Description of Goods  |
|-----------------------|
| ADAPTOR UNION 25-3/4" |
| ADAPTOR UNION 32-1"   |
| BALL VALVE 2"         |
| DEC VALVE 03/4"       |
| DEC VALVE 21/2"       |
| ELBOW 0¾"             |
| ELBOW 2 1/2"          |
| FLOAT VALVE 63        |
| G.1 PIPE 0¾"          |
| G.I PIPE 1"           |
| G.I SOCKET 11/4"      |
| G.I SOCKET 11/2"      |
| G.I SOCKET 2"         |
| G.I TEE 1"            |
| G.I TEE 11/4"         |
| G.I TEE 1½"           |
| G.I TEE 2"            |
| G.I TEE 21/2          |
| NIPPLE 03/4"          |
| NIPPLE 1"             |
| NIPPLE 1¼"            |
| NIPPLE 1½"            |

| Description of Goods | 2000     |
|----------------------|----------|
| NIPPLE 2"            |          |
| NIPPLE 21/2"         |          |
| PVC TEE 32           |          |
| PVC TEE 40           |          |
| PVC VALVE 32         |          |
| PVC VALVE 40         |          |
| REDUCER G.I.1"-34"   |          |
| PVC RED SOCKET 75-6  | 3        |
| SADLE PIECE 32-1"    |          |
| SADLE PIECE 40-1     |          |
| TAP 03/4"            |          |
| UNION 03/4"          |          |
| UNION 1"             | a nuri z |
| UNION 1 1/4"         |          |
| UNION 1 1/2"         |          |
| UNION 2 "            | TE S     |
| UNION 2½"            |          |
| NON RETURN VALVE     | 2"       |
| GEBAJOINT            |          |
| GLUE 1 kg            |          |
| HERM (ROLL)          |          |
| SAND PAPER ( ml)     |          |

#### ARTICLE 13: PIPING

#### 13.1 DESCRIPTION

This item shall consist of the supply and lying of all pipes, including the installation of accessories like couplings, tees, reducers, etc. etc. to entirely complete this item as per these specifications and plans provided.

#### 13.2 CARE/LAYING OF PIPES

The soil in the bottom of the trench shall be lightly scarified before laying the pipes or other hydraulic elements.

During transport, storage, and assembling of piping element care shall be taken to avoid soil and other contamination from entering the system.

Lying of pipes, assembling of pipes and all other works directly related to piping works, shall only be executed during dry weather conditions.

Pipe elements and connecting accessories shall be assembled in such a way that no tension can occur in the separate elements.

Only skilled plumbers shall be employed on any plumbing work.

Pipe joints, reducers, tees, etc shall be connected in conformity with the manufacturer's prescriptions

# 13.3 METHOD OF DETERMINING QUANTITY OF G.I AND PVC PIPING LAID

The quantity of PVC and G.1 piping laid shall be measured per linear meter of laid pipe. Measurements shall be made for each class of pipe and each diameter of pipe separately.

# CHAPTER V: CONSTRUCTION METHODS

# ARTICLE 14: SETTING OUT OF WORKS

The contractor shall be responsible for the setting out of all pertinent lines, works, grades. reference points and levels that may be required for the proper and accurate positioning of all the structures on the work site. The works so set out shall be received by the Supervising Engineer before construction work actually begins

# ARTICLE 15: EXCAVATION OF TRENCHES

Pipe trenches shall be excavated to a depth of at 60cm and at most 100cm and width of 40cm. The bottom of each trench shall be free of any stones or other materials which could damage the pipes.

#### ARTICLE 16: BACKFILL

The Contractor shall be responsible for all backfill operations. However, such operations shall only be carried out after the dimensions of the trenches have been approved by the Supervising Engineer.

After the pipes have been laid in the trenches by qualified plumbers, and the successful hydraulic tests conducted, they shall be carefully covered with soil and rammed in. in soil layers of 20cm thick The backfilling of pipes crossing motor able roads shall be done in conformity with laid down norms. The compaction requirement for backfill shall be at least 90% of the dry modified optimum proctor density.

# ARTICLE: 17. MAINTENANCE OF EXCAVATIONS

The Contractor shall bear the risk associated with the collapse of any surface exposed as a result of excavation effected anywhere on the work site, whether or not he takes any precautions against such accidents. The nature of the precautions he may take shall be entirely at his discretion. No water shall be allowed to accumulate in any part of an excavation. For that reason, every excavation shall be protected against flooding, seepage, run-off, etc. should water accidentally enter any excavation; it shall be immediately removed by pumping or bailing at the expense of the Contractor.

# ARTICLE: 18. MAINTENANCE OF EXCAVATIONS

Construction of a 20m3 reinforced concrete Elevated 5m height (i.e. from ground to the bottom of the tank) water tight storage tank with the following Dimensions (3x3x1.6)m for cubic tank and embedded protected metallic ladder. This tank shall be support with 5 pillars (0.25x0.30x5)m build with six binding rods Ø12 for each of the pillars for sustainability and footing build respecting the norms and technical specifications.

#### CHAPTER VI: BOREHOLE EXECUTION

### ARTICLE 19- SITE SELECTION AND CHOICE OF DRILLING TECHNIQUE

#### 19.1- Site Selection:

The site for the borehole shall be chosen after hydrogeologic and geophysical studies. These studies will start with the interpretation of aerial photos of the area aimed at locating fractures and structural traps to retent aquifers. Geophysical prospecting will then be carried out on these anomalies so as to confirm the hydrogeologic results and obtain precisions on the aquifers. This geophysical surveys will be done using the Electric Method, precisely Resistivity Profiling and Resistivity Depth Sounding.

Studies carried out on previous boreholes done in similar geological formations show that with the respect of minimum precautions during site selection, a success rate of .....% (minimum yield of 0.7m³/h after designing the borehole) is expected.

The selected site will therefore depend on the results obtained after these surveys; but the ideal site will be that which will be easily accessible to the beneficiaries. A site selection report shall be presented indicating the methods used in choosing the site and also outlined in a sketched plan of location.

#### 19.2- Choice of Drilling Technique:

The hydrogeologic nature of the area is such that drilling will be done in unconsolidated and hard formations and consequently requiring the use of a well equipped drilling rig in order to face any eventuality.

The borehole facitates the extraction of water from deep aquifers in fractured hardrocks, thereby making it possible to prevent pollution from superficial waters. Precautions are therefore taken to isolate superficial formations so as to avoid the vertical downward propagation of superficial pollution.

Drilling through the loose formations may need the use of a drilling fluid which can be water or muddy water; and of course the temporal use of PVC or metallic casing of diameter 175-195mm. Drilling shall be done using compressed air supplied by a high pressure compressor. The tool and bit used should be adapted both to the loose and hardrock formations.

Studies on existing boreholes in the area reveal that the depth will be between 40m and 80m (for results average60m) therefore the drill pipes or rods should be available to attain this depth as on bill of quantties.

The borehole shall be equipped with a submersible solar pump. The bodywork of the pump and its accessories should be composed of materials that are resistant to corrosive water and cannot be oxidised.

#### CHAPTER VII: DRILLING WORKS.

#### ARTICLE 20- DRILLING OF BOREHOLE

The borehole shall be drilled respecting the technical specifications outlined here and shall be accepted as productive (positive) if its yield is at least 0,7 m<sup>3</sup>/h (700l/h) and the water is potable after analyses.

#### 20.1. Organization of the work-site

Considering the results obtained after previous drilling campaigns of boreholes in the area, an average depth of sixty (60)m is proposed for the borehole.

The success of this project largely depends on the perfect coordination of the different activities by the Contractor (the Supply and the installation of the submersible solar pump, the drilling process respecting the appropriate drilling technics, the appropriate borehole design, cleaning and development of the borehole, the pumping test, the construction of the superstructure with a good drainage system, water analyses, project sustainability). This coordination requires the strict respect of the execution plan of the borehole which contains the outlined execution plans of the different activities.

The Enterprise shall place its Technical Director who shall be responsible to the Administration and on the worksite, the work execution shall be supervised by a Foreman who is well qualified and experienced in the domain of borehole drilling, submersible solar pump installation and project sustainibility. The execution plan should be concieved in such a way that the different phases will be done without unjustified stoppage.

The state of work progression shall be established monthly and if after two months, the progression rate is considered low, the Contractor shall be asked to deploy additional means to the worksite so as to accelerate work progression and meet up with the deadline.

During the work execution, the Administration has the right to modify the work.

#### 20.2. Working Hours.

The general conditions fixed for workers by the Cameroon Legislation also applies to the Contractor's workers in the worksite. There shall be no work at night.

#### 20.3. Equipment and Materials for execution

#### 20.3.1 General conception of equipments and materials

The Contractor shall be responsible for the choice of the equipments and materials. The general conception of the drilling rig and the materials to be used for the execution of the borehole should take into consideration the local milieu: the state of roads and accessibility, as well as the rate of execution stated above.

#### 20.3.2. State of the equipments and materials

The execution calendar obliges the Contractor to be in possession of a drilling rig inorder to execute this project, immediately he is notified of having been chosen to execute the job.

The serial number, the age and the origin of the drill ought to be specified in the bid. Anyway, the proposed equipment should be in a good state.

#### 20.3.3. Description and specifications of the drilling rig.

The drilling rig that is needed for this project will be composed of the following which must be inspected and minutes of confirmation or reject taken:

#### The Drill

A conventional rotary apparatus using compressed air and water or mud, and specially adapted to using the tool and bit in loose formations and the down-the-hole hammer in hardrocks. Drilling through the loose formations and to avoid frequent collapse of these formations especially when the hardrock is to be drilled, the use of temporal casing is very obligatory. This temporal casing can be of steel or PVC nature and facilitates drilling in both the loose and hardrock formations without any difficulty.

The drilling rig should have a capacity of attaining an average depth of 100meters with a boerhole diameter of:

- 12<sup>1</sup>/<sub>4</sub>" (175-195mm) for rotary drilling with compressed air using tools and bits with water or mud.
- 6<sup>1</sup>/<sub>4</sub>" (165mm) for rotary destructive drilling with compressed air by using the down-the-hole hammer.

#### Other Equipments.

The Air Compressor:

This should be a high pressure compressor of air, of at least 5 m<sup>3</sup>/mn à 7 bars.

Sufficient Steel pipes, attaining an average depth of 100m.

Pumping tests should be done using an **immerged electrique pump** of diameter less than 110mm, and capable of supplying yields of 10 m<sup>3</sup>/h at a depth of 30meters and of 6 m<sup>3</sup>/h at a depth of 80meters.

An Electric sounder for the measurements of the water levels in the borehole ought to be available. Each drilling team should have a rapid means of communication.

20.3.4 The Conformity Visit.

A conformity visit of all the equipments and materials shall be done at the beginning of the work execution inorder to verify:

· their conformity with those proposed in the Contractor's bid,

 the relationship between the capacities of these equipments and materials, the prescriptions in the Technical Specifications Journal and the execution deadline.

The pronouncement of this visit shall be expressed in a Report which shall not in any way set free the Contractor from his engagements.

#### 20.4. Description of the Borehole.

#### 20.4.1 The Method of execution of the Borehole.

The choice of the methods and materials to be used as well as the exact diameters of the borehole would be at the initiative of the Contractor and under his sole responsibility.

The following specifications have been tentatively presented. Anyway, it is specified that:

- except by special derogation, drilling with the down-the-hole hammer in the hard bedrock shall never be done without the use of the temporal PVC or steel casing, at the levels of the loose or unconsolidated weathered formations,
- the drilling through the loose nonconsolidated sections of the weathered rocks may require the use
  of water or muddy water or mud. The substances used should have a composition that would not
  seal the productive layers and should be biodegradable.

20.4.2 Sampling.

During drilling, the samples of the cuttings shall be taken at everychange of phase (rock type) or every meter. The samples shall be placed in small labelled (depth of sample) plastic bags and kept in the worksite at the disposal of the Contract Engineer, who shall decide on their outcome.

#### 20.4.3 Characteristics of the Borehole.

The principal characteristics of the borehole are summarized as follows:

#### Borehole in the hard bedrock:

- Drilling în the loose unconcolidated weathered rock formations by rotary drlling of minimum diameter 9"5/8 right to the contact with the hard bedrock,
- Putting in place of a colon of temporal Casing of diameter 178/195mm in PVC or in steel,
- Continuous drilling in the hard bedrock using the down-the-hole hammer, of diameter 165mm, right to a maximum total depth of 100meters,

- Putting in place of a catchment colon using the PVC Screen of diameter 110 125mm with slot openings of  $\emptyset \le 2$ mm,
- Putting in place of a gravel pack of a quartzeous nature and calibrated: (1 2mm) or (2-4mm).
- Putting in place of a seal composed of alluvium or elluvium.
- Withdrawal of the temporal Casing,
- Putting in place of a concrete borehole cap of 2m minimum.

#### 20.5. Borehole Design.

If the borehole is considered exploitable, its design is carried out immediately the drilling process comes to an end.

In all the cases, the productive borehole shall be designed all through the length of the catchment zone PVC casing of diameter 110/125 mm, of which the characteristics are specified further below in this file.

• This casing shall be armed with slot openings of  $O \le 2$ mm (Screen), which shall be placed at the levels of water arrivals by screen fragments of length 3 or 6meters. The base of the colon shall be blocked with borehole stopper.

The annular space between the soil formation and the PVC colon shall be filled with a quartz gravel pack of a grain-size: (1 - 2mm) or (2-4mm) all along the length of the screen plus 3meters. The gravel shall be disinfected being introduced into the annular space of the borehole.

The grain size of the gravel shall be 1-3mm. The gravel shall be composed of clean quartzeous and smooth material.

On top of the gravel pack filter, a clayey seal of 1 meter thick shall be put in place, it has as goal to prevent the pollution of the borehole by superficial waters.

Above the clayey seal, the borehole shall be filled with alluvium or elluvium, in which case this substance shall constitute material for effective back-fill, and finally the top of the borehole shall be filled with concrete for a depth of 2meters.

The casing shall overlap the earth surface by 0,50m. This casing shall be momentarily locked with a screwed cork.

#### 20.6. Development

Development is done by air-lift with double tube using the drilling rig or an independent unit. The yield obtained after the development should not be more than 10 % less than the yield obtained at the end of drilling.

Development shall continue until clean water with no residual sand grains nor clay particles is observed. The Contractor should control the yield in sand grains of the water, by applying the Method of observing sand deposit in a10litres bucket of water and of which the diameter should not be greater than 1cm at the end of development.

The average time for development shall be 4 hours.

If technical errors occur during the drilling process or during development, the additional time beyond the 4hours, shall be under the responsibility of the Contractor and, if clean water is not obtained after development, the borehole will not be received.

In case an independent unit was used for development, the return of the drilling rig for the partial or complete repeat of the drilling process, shall be under the charge of the Contractor.

The yield shall be measured after every 15 minutes. The water level and the depth of the borehole shall be measured before and after the development.

The accepted tolerance for the measurements (including those obtained during pumping test) shall be:

- 10% for the yields,
- 1cm for the water level,
- 5cm for the measurements of depth.

#### 20.7. Pumping Tests- Superstructures - Disinfection of the Borehole and Water Analyses.

20.7.1 Pumping Test.

These tests shall be executed using an immerged pump, of a minimal capacity of 10 m<sup>3</sup>/h at a depth of 30m or 6 m<sup>3</sup>/h at 80meters. The pumping test (type CIEH) shall be done for a time lapse of 4 hours (3 phases of an increasing yield). The processes shall comprise: Restoration, Pumping and Recharge. The recharge after pumping shall be done for an hour. The mesurements of the water levels shall be effectuated using an electric sounder, while the measurements of the yield shall be done using 200litres drums. All the measurements shall be recorded in forms recommended by the Ministry incharge of Water.

#### 20.7.2 Superstructures

The Contractor shall have to construct the following superstructures:

 A protective reinforced concrete corping of dimensions 1m x 1m and of height (30cm) which is compatible with the pump piping, and situated above the reinforced concrete slab,

A model plan shall be available. The superstructures would, however, be constructed on the basis of detailed plans that are convenient for the type of manual pump which shall be accepted by the Contract Engineer. The bidder ought to enclose these detailed plans in his bid. The concrete ought to have a composition of 350kg of cement per m³ and after 28 days have a resistance of 28 kN/cm², it shall be reinforced with welded iron rods forming a grid of 150mm (diameter of the rods being 5mm). Provision must be made for clean aggregate, gravel and sand, as well as non corrosive water.

The identification number of the borehole and the date of execution shall be carefully engraved on a non oxidizing metallic plate permanently pasted on the concrete of the pump support; and on this plate shall also be indicated the origin of the funding.

#### 20.7.3 Water Analyses.

Before the borehole design, the Contractor shall carry out the following measurements: pH, conductivity, temperature.

At the end of Development, the Contractor shall proceed to the disinfection of the borehole by the injection of Calcium hypochlorite (or its equivalent) into it.

At the end of the Pumping test, the Contractor shall proceed to the sampling of water to carry out physico-chemical analyses that shall be done in Laboratories recognized by the Administration.

#### 20.8. Control of the Works.

The supervision and control of the works shall be done by a Controler or a Consulting Firm under the coordination of the Contract Engineer.

#### 20.8.1 Worksite logbook.

Inorder to carry out an effective follow-up of the execution of the project, the Contractor shall make available in the worksite a logbook on which shall be recorded everything concerning work progression. This log book will help the Controler, on arrival in the worksite, to exactly know the state of evolution of the project.

The book will be held by the "Recorder", an employee of the Enterprise, and that will be his sole task in the worksite. The Recorder shall always put in writing all the daily activities in this book, as operations evolve.

In this book shall be recorded the following informations:

- · Name of worksite (name of village),
- Serial number of borehole in the village,
- · Dates and time of arrival and of departure of the drilling rig,

- · Distance covered by the drilling rig from the previous site to get to the present site.
- Time used to run the compressor to execute the borehole.
- · Time used in installing the drilling rig and time that drilling started.
- · Drilling time for every pipe,
- · Diameter and method used in sinking every pipe,
- · Depth attained by every pipe,
- Nature of rock formations cut through "driller's cross-section".
- · Depth of temporal casing, time used in placing and removing the temporal casing,
- Composition of the borehole design: length of casing, screen, volume of gravel pack, level of the
  emplacement of the clayey seal, thickness of the concrete, etc.
- Duration and yields of pumping test, water quality and levels following the instructions given by the Engineer during the Development and Pumping test operations,
- In short, all the technical details, incidents, breakdowns, difficulties specific to the evolution of the project, indicating the time these occurred.

The book shall be signed by the Representatives of the Administration and that of the Contractor, and shall serve as the basis for the establissement of vouchers.

Remarks and reserves made by the Contractor and/or the Administration shall be recorded in this book.

#### 20.8.2 Control and supervision

The control and supervision of works shall be carried out by the Representative of the Administration and shall be based on the following items:

- · Definition of the work plan and its execution calendar in agreement with the Contractor.
- · Site implantation.
- Indicative forecasts on the geology and on the depth to be attained by the borehole.
- · Decisions on whether to continue or stop drilling, its design or its abandonment.
- Elaboration of the borehole design in collaboration with the Chief driller, taking into consideration the yield.
- Supervision and interpretation of the Development and Pumping test results.
- Choice of the configuration of the superstructures depending on the landscape (topography).
- Supervision of the pump installation and the training of local pump caretakers.
- · Supervision of the analyses related to water quality.
- Control the effectiveness of the activities concerning the training and sensitization of the Water Management Committee.

# 20.9. Origin and quality of materials

# 20.9.1 General dispositions.

The Contractor shall present to the Delegation incharge of Water Resources for approval the materials he intends using, indicating their nature and their origin including the **drilling rig**. All the materials found faulty shall be evacuated by the Contractor at his own expenses. The Contractor shall be responsible for the regular supply of materials for the smooth running of the project.

Not withstanding the approval of the quality and origin of the materials by the Delegation incharge of Water Resources, the Contractor remains solely responsible for the quality of the materials used for the project. It is left for him to carry out at his own expenses all the necessary tests and analyses to be sure of the materials used.

It is left for him to make all the necessary moves to obtain autorisations or permissions, and carry out payments if necessary to enable him exploit quarries or other substances, and the site for the installation of the project.

#### 20.9.2 Characteristics of the casing and screen.

The casing and screen shall be of strong PVC (types for boreholes). The diameters shall be 110/125 mm. The origin and quality of these tubes ought to be approved before being used.

These tubes should be smooth, with solid round or square centralized fittings that can enable the tubes attain a depth of 100meters.

The tubes should have the garanti of being resistant to all the stress manipulations during their installation and during pumping. The PVC shall be composed of matter that cannot dissolve in water and modify its quality.

The slot openings of the screen shall be done mechanically in the manufacturer's factory. The slot openings shall have a diameter of less than 1mm. The percentage of openings shall not be less than 2% of the total surface area of the PVC tube.

#### 20.9.3 Cement

The cement to be used shall of the type PORTLAND artificiel CPA 325. It should be obtained in bags of 50kg. Any bag with hardened fragments shall be rejected. The recuperation of cement dust that has fallen on the ground shall be prohibited.

#### 20.9.4 Gravel

The gravel introduced into the annular space of the borehole shall be clean gravel composed of smooth quartz and of grain-size 1-3mm.

#### 19.10. Technical File.

A technical file of the borehole shall be prepared by the Contractor. This technical file shall contain:

- · the location of the borehole on the plan of the village.
- the technico-geological cross-section of the borehole.
- · the results of the Development and cleaning test,
- · the interpretation graphs of the Pumping tests indicating the depth of pump installation.

#### ARTICLE 21: GUARANTEE OF WORKS

The Contractor shall take an engagement to execute the borehole with the materials he proposes and to respect all the technical norms in force.

In case of an accident leading to the abandonment of the borehole, the Contractor may be compeled to another borehole near the previous site, except the geologic conditions are abnormally unfavorable. The Contractor shall not be entitled to any remuneration for the abandoned borehole.

The obligations of the Contractor during the guarantee period consist of changing, or reparing the worn out parts or those that have been damaged due an error by the manufacturer.

#### ARTICLE 22 -ORIGIN AND QUALITY OF MATERIALS AND EQUIPMENTS

The Contractor shall present the materials and equipments he intends to use, with indications of their nature and origin, to the Contracting Officer, for approval. Any material or equipment that is found faulty shall be rejected and evacuated by the Contractor and at his sole expenses.

Not withstanding the approval of the quality and origin of the materials by the Contracting Officer, the Contractor remains solely responsible for the quality of the materials used for the project. It is left for him to carry out at his own expenses all the necessary tests and analyses to be sure of the materials used. It is left for him to make all the necessary moves to obtain autorisations or

permissions, and carry out payments if necessary to enable him exploit quarries or other substances. and the site for the installation of the project.

# CHAPTER VIII: SUPPLY AND INSTALLATION OF SOLAR SUBMERSIBLE **PUMP**

# ARTICLE 23 - INSTALLATION OF SOLAR SUBMERSIBLE PUMP

Characteristics of the Solar Pump.

The choice of the pump shall take into consideration the government policy on the standards of hydraulic equipements for the rural communities especially in installation of solar pumps.

#### 23.1 .Diameter

The borehole shall be equipped with PVC tubes of which the usable minimum internal diameter shall be 110mm

#### 23.2 Yield

The dynamic levels in the project zone shall be situated at an average depth of around twenty meters, anyhow the proposed model of pump shall be one that have to function without the dispensation of too much effort for installation depths of about 50m and of dynamic levels of equivalent depths.

The yield during the normal rythmic exploitation with the pump should be at least 2.8m<sup>3</sup>/h at 25m and 0.7m<sup>3</sup>/h at 40m.

# 23.3 Resistance to corrosion

All the parts constituting the pump ought to be resistant to water and air corrosion (in this case, the Contractor is asked to present documents to ascertain that control tests were carried out in the factory on the supplied materiels or their equivalents to be supplied). The Contractor shall attach to his bid the list of parts that shall be in contact with water and specify their component elements and the anti-corrosion process to be applied on them.

#### 23.4 Fittings.

The supply of the solar submersible pump should also include:

- · the supply of tools to fix the pump onto the base: wire mesh welded with bolts, nuts and fitting washers; non return valves, plumbing accessories at the storage tank shall of good quality.
- the supply of seals.

The fittings that shall be used should have closing plates which should be put in place while waiting for the pump to be installed. All fittings shall be approved by the Supervising Engineer before use. The performance guarantee of work shall cover all defects in fittings, their handling and workmanship.

#### 23.5 Maintenance

The Supplier shall fill a table describing the nature of the day-to-day maintenance operations with as information for each case:

- · the periodic interval
- · the parts concerned
- · the costs of the parts in the locality
- · the required set of tools

#### 23.6 Repair works

The Supplier shall specify the breakdowns that shall require the withdrawal of the pump from the borehole as well as the different unit weights, notably:

· the whole fountain,

- · the linear meter of the aspiration pipe (with the rod) with and without water,
- · the pump cylinder.

For more frequent interventions, he shall specify the nature of intervention and its frequency.

#### 23.7 Accessories

The Contractor should show the pump caretaker the key or keys required to help mount, dismount and replace parts that have brokendown.

23.8 Spare parts

The spareparts ought to be, as from the beginning of the project, be available in the different sales points. A kit of spare parts shall be made available and handed to the Village Water Management Committee.

23.9 Technical and pedagogic brochures

The Contractor ought to make available technical and pedagogic brochures on the mounting, the good functionning, the maintenance and the repairs of the pump.

These brochures shall simultaneously contain three levels of information.

a) A level that exclusively illustrates the following themes:

- How to pump correctly (illustrations with photos or drawings).
- · How to detect an abnormaly in the fonctionning of the pump.

· How to carry out minor repair works.

- b) A level that gives complete informations on the assembling of the pump for use and for maintenance. All the possible types of breakdowns that can occur should be mentionned as well as the means to remedy the situation.
- c) A complete documentary level about all the aspects of the pump: manufacture, constituent parts, materials used, assembling, current maintenance, important repair works, list of the spare parts and their approximate lifespan, etc.

These brochures shall be delivered with the pump, a copy shall be kept with the Supplier's representative.

Besides, the Contractor should prepare a maintenance form for the pump (as well as extra copies), which shall be kept in the village, and in which all repairs and maintenance works shall be recorded.

23.10 Putting in place of the maintenance system

The Contractor shall take care of the training of two (02) pump repairers to carry out minor maintenance and repair works on the installed pump. The training of these pump repairers shall be a condition for the provisional reception of the borehole.

# ARTICLE 24: DESIGN OF SOLAR COMPONENTS (PANELS, BATTERIES, INVERTER, ETC)

#### 24.1 DEFINITION OF SOME COMPONENTS:

# Solar panel:

A solar panel system is made up of multiple photovoltaic (PV) panels framed by copper cells captors and a rack system that holds the PV panel in place. For the project, each pole will have to receive (01) and should be placed horizontally but lightly inclined toward the east and west. The charges from the captors will be conducted in a scheme connected in series for to capitalise the conductivity. The rack system will be carried by a holder constituted of a galvanised zinc tube or equivalent material.

Solar power regulator:

A solar regulator (charge controller) is a small box consisting of solid state circuitry that is placed between a solar panel and a battery. Its function is to regulate the amount of charges

coming from the panel that flows into the deep cycle of the battery bank in order to avoid the battery being overcharged.

#### • Timer:

A timer switch (contactor) is an electronic device that is placed between a battery and the energy receivers. Its function's has a switcher and permits to interrupt the conduction of the current to re-establish it at a required time. For the project, the device will have to be set to switch on the conduction at 6:30 pm and switch it off at 6:30 am

## Solar PVC cable:

The polyvinyl chloride cable (conductor) is constituted of electric rubs that are protected by coats of isolate materials. Its function is to carry the phase and neutral charges produced in between the various machines. For the project, a section 2x6mm is required.

#### · Plug:

The plugs are protected electric devices (conductors) that help to sock the electric rubs into the various machines. For the project, the required set of plugs (male and female connectors, Y branch and T branch plugs) will be necessary for a conducive running of the

# ARTICLE 25: TRANSPORT, DELIVERY AND INSTALLATION OF PUMP

The Contractor shall equally take care of the transportation and installation of the pump on the site.

# **ARTICLE 26: PROVISIONAL RECEPTION**

The materiels to be used ought to undergo a qualitative provisional reception, which shall be based on the administrative and technical documents justifying the quality of the materials used are in conformity with the technical objectives.

This reception shall be later followed by a technical reception which shall take place in the worksite after the installation of the pump and after observing it functioning.

The decision taken during this reception does not liberate the Contractor from his engagements with respect to the deadline as well as the technical specifications.

Any change of material that was proposed in the bid (type, characteristics, origin, etc.) before or after the conformity visit and during the execution of the project, is forbidden except authorized in writing by the Contracting Authority, following the application forwarded by the Contractor.

If the works are not in conformity with the specifications, the Contracting Authority can reject them and ask for their remplacement or necessary modifications, without any extra charge for this.

# ARTICLE 27: CONDITIONS FOR THE FINAL RECEPTION

The final reception shall be pronounced after the expiration of the guarantee date which comes one year after the provisional reception. There shall be no specific pumping test during the final reception, but a test of the equipments used in exploiting the groundwater and a survey among the population to confirm the good working order of the pump during the one year guarantee period.

| CONT                               |                |                            |                                  | B 2025                       |               |                                  |  |                          |  |
|------------------------------------|----------------|----------------------------|----------------------------------|------------------------------|---------------|----------------------------------|--|--------------------------|--|
| P.O. B                             | ox             | Phone                      |                                  | CROSS - SECTION              |               |                                  | N OF BOREHOLE  Borehole with manual pump |                          |  |
| BORE                               | HOLE           | CONSTRUCT                  | ION PROJECT                      | Locality.                    |               |                                  |  |                          |  |
| DEPTH Orilled: Designed: lardrock: |                | DESIGN  Nature: Ointernal: | Date:                            |                              | to            | Region:<br>Division:<br>Council: |  |                          |  |
| ararock.                           |                |                            | Oexternal:<br>Length of Casing:  |                              | dinates of lo | ocality: x=                      | y=                                       | Z <sup>m</sup>           |  |
| ield at th                         | e end of drill | ling:                      | Length of screen:  Slot opening: | Geophysic.<br>Developme      | ent: Yield:   |                                  | Duration:                                |                          |  |
| huntity o                          | of gravel pac  | k:                         | Type of joining:                 | BOOK SHOW THE REAL PROPERTY. | ovisional R   | 1000                             | Nature of casing:                        |                          |  |
| DRSERV                             | ATIONS:        |                            | Direction of                     | Nature of §<br>Grain size    | gravel pack   |                                  | Type of relief:                          |                          |  |
| (mm)                               | Depth<br>(m)   | Technical C.S.             | Water level & Yield              | Drilling<br>Speed<br>(m/h)   | Depth<br>(m)  | Geological<br>C.S.               | Geological<br>description                | Nature<br>of<br>Aquifer: |  |
|                                    |                |                            |                                  |                              |               |                                  |  |                          |  |
|                                    |                |                            |                                  |                              |               |                                  |  |                          |  |

| Geophysical site and serial n° Existent Borehole. $\pm = \text{Existent V}$ | ON OF BOREHOLE  Well. Stream or River | Village:<br>Region:<br>Division: |
|---|---------------------------------------|----------------------------------|
|   | Forest) =Road                         | Council:<br>Code N°:             |
|   |                                       |                                  |
|   |                                       |                                  |
|   |                                       |                                  |
|   |                                       |                                  |
|   |                                       |                                  |
|   |                                       |                                  |
|   |                                       |                                  |
|   |                                       |                                  |

Resource persons met with:

Date:

| NORTH-WE                    |        | COUNCIL/ PIB             | 2025                   |                                 | BOREHOLE CLEANING DEVELOPMENT |
|-----------------------------|--------|--------------------------|------------------------|---------------------------------|-------------------------------|
| CONTRACTO<br>BP<br>PHONE N° | R:     |                          | C                      | OCALITY:<br>OUNCIL:<br>IVISION: | REGION:                       |
| Depth Drilled:              | Water: |                          |                        | Pesigned Depth:<br>f Drilling:m | /surface                      |
| DATE                        | TIME   | DURATION<br>(in minutes) | MESURED<br>WATER YIELD | WATER QUAL                      | OBSERVATIONS                  |

| DATE         | TIME           | DURATION<br>(in minutes) | MESURED<br>WATER YIELD   | WATER QUALITY | OBSERVATIONS |
|--------------|----------------|--------------------------|--|---------------|--------------|
|              |                | 0                        |  |               |              |
|              |                | 5                        |  |               |              |
| W TELEVISION |                | 10                       |  |               |              |
| 1            |                | 15                       |  |               |              |
|              |                | 30                       |  |               |              |
|              |                | 45                       |  |               |              |
|              | and the second | 60                       |  |               |              |
| 7            |                | 90                       |  |               |              |
|              |                | 120                      |  |               |              |
|              |                | 150                      |  |               |              |
| West - Free  |                | 180                      |  |               |              |
| -            |                | 210                      | - Musiness   |               |              |
| -            |                | 240                      |  |               |              |
|              |                | 270                      |  |               |              |
|              |                | 300                      |  |               |              |
|              |                | 330                      |  |               |              |
|              |                | 360                      |  |               |              |
|              |                | 390                      |  |               |              |
|              |                | 420                      |  |               |              |
|              |                | 450                      | Service Service  |               |              |
|              |                | 480                      |  |               |              |
| -            |                | 510                      |  |               |              |
|              |                | 540                      |  |               |              |
| -            |                | 570                      |  |               |              |
|              |                | 600                      |  |               |              |
| -            |                | 630                      |  |               |              |
|              | 1000           | 660                      | A DESCRIPTION OF THE PARTY OF T |               |              |
|              |                | 690                      |  |               |              |
|              |                | 720                      |  |               |              |
|              |                |                          |  |               |              |
|              |                |                          |  |               |              |
|              |                |                          |  |               |              |

"SAND GRAIN TEST": Sediments at the bottom of the container have a  $\emptyset \leq 1$  cm. Sediments at the bottom of the container have a  $\emptyset > 1$  cm.

NAME AND SIGNATURE OF THE OPERATOR:

NAME AND SIGNATURE OF THE CONTROLER:

| CONTRACTOR: BP   | NORTH-W        | C  | OUNCIL/ PIB           | 2025   |           | REPOR      | T ON AQU          | IFER (YIELD) TEST |
|--|----------------|--|-----------------------|--|-----------|------------|-------------------|-------------------|
| Depth of Pump installation:  | BP<br>PHONE N° |  |                       |  | COUN      | CIL:       |                   | REGION:           |
| Static Water level:m/surface   Static Water level:m/surface   Measuring Reference point:   TIME (in minutes)   (in minutes) | Date:          |  |                       |  | D         | enth of    | Pump installation |                   |
| Static Water level:  |                |  |                       |  |           | epiii oi i | omp installant    | on:               |
| TIME (in minutes)  | Static Water   | level: r   | n/surface             |  |           | 0.6        |                   |                   |
| (in minutes)         (in minutes)         (m³/h)         Level (m)         OBSERVATIONS           1         1         1         1         2         1         3         1         4         1         3         1         4         1         4         1         4         1         4         1         4         1         4         1  | TIME           | DURATION   |                       | 1 2  | neasuring | Ketere     | nce point:        |                   |
| 1  |                |  | DAYLOS GOAD COMPANIES |  |           | Water      | Recharge (m)      | OBSERVATIONS      |
| 2 1 3 1 4 1 5 5 1 6 6 1 7 7 1 8 8 1 9 9 1 1 1 1 1 1 1 1 1 1 1 1 1 1  |                | The second secon | (111711)              | rever (i   | m)        |            |                   |                   |
| 3 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1  |                |  |                       |  | -         |            |                   |                   |
| 4     1       5     1       6     1       7     1       8     1       9     1       10     1       11     1       12     1       13     1       14     1       15     1       20     5       25     5       30     5       35     5       40     5       45     5  |                |  |                       |  | -         |            |                   |                   |
| 5     1       6     1       7     1       8     1       9     1       10     1       11     1       12     1       13     1       14     1       15     1       20     5       25     5       30     5       35     5       40     5       45     5  |                |  |                       | -  |           |            |                   |                   |
| 6 1 7 1 8 1 9 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1  |                |  |                       | -  | -         |            |                   |                   |
| 7 1 8 1 9 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1  |                |  |                       |  |           |            |                   |                   |
| 8     1       9     1       10     1       11     1       12     1       13     1       14     1       15     1       20     5       25     5       30     5       35     5       40     5       45     5  |                |  |                       |  |           |            |                   |                   |
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| 11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1   |                |  |                       |  |           |            |                   |                   |
| 12 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1   |                |  |                       |  |           |            |                   |                   |
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| 14     1       15     1       20     5       25     5       30     5       35     5       40     5       45     5  |                |  |                       |  |           | 200        |                   |                   |
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| 40 5<br>45 5   |                |  |                       |  |           |            |                   |                   |
| 45 5   |                |  |                       |  |           |            |                   |                   |
|  |                |  |                       |  |           |            |                   |                   |
|  |                |  |                       |  |           |            |                   |                   |
|  | 60             | 15   | L. S. Clean To        |  | S CLIPP   |            |                   |                   |
| 75 15  |                | 15   |                       |  |           |            |                   |                   |
| 90 15  |                |  |                       |  |           |            |                   |                   |
| 105 15   | 105            | 15   |                       |  |           |            |                   |                   |
| 120 15   |                | 15   |                       |  |           |            |                   |                   |
| 135 15   |                |  |                       |  |           |            |                   |                   |
| 150 15   |                |  |                       | A CONTRACTOR OF THE PARTY OF TH |           |            |                   |                   |
| 165 15   |                |  |                       |  |           |            |                   |                   |
| 180 15   |                |  |                       |  |           |            |                   |                   |
| 195 15   |                |  |                       |  |           |            | W                 |                   |
| 210 15   |                | 15   |                       |  |           |            |                   |                   |
| 225 15   | 225            | 15   |                       |  |           |            |                   |                   |
| 240 15   | 240            | 15   |                       |  |           |            |                   |                   |
| 255 15   | 255            |  |                       |  |           |            |                   |                   |
| 270 15   |                |  |                       |  |           |            |                   |                   |
| 285 15   |                |  |                       |  |           |            |                   |                   |
| 300 15   |                |  |                       |  |           |            |                   |                   |
| 315 15   |                |  |                       |  |           |            |                   |                   |
| 330 15   |                |  |                       |  |           |            |                   |                   |
| 345 15   |                | 15   |                       |  |           |            |                   |                   |
| 360 15   |                |  |                       | Alexander of the second  |           |            |                   |                   |

CONTROLER:

OPERATOR:

# Document No. 6 SCHEDULE OF UNIT PRICES

# BILL OF QUANTITIES AND COST ESTIMATES FOR THE CONSTRUCTION OF A BOREHOLE POWERED BY SOLAR ENERGY AND LINKING TO THE BANGOLAN SCAN WATER SYSTEM, BABESSI COUNCIL AREA, NGOKETUNJIA DIVISION OF THE NORTH-WEST REGION.

# UNIT PRICE SCHEDULE

| Price<br>N° | WORK DESCRIPTION AND THE UNIT PRICES (Excluding taxes all in words)  | Amount in figures         |         |  |
|-------------|--|---------------------------|---------|--|
| 100         | DATA COLLECTION DESIGNATION  | SN, AND SITE INSTALLATION |         |  |
|             | installation and preparation of documents  | IN, AND SHE INSTA         | LLATION |  |
| 101         | It is applied as a lump sum to the task.  The Lump Sum: Francs   |                           |         |  |
|             | Site selection: Hydro-geologic, geophysical  |                           |         |  |
| 102         | studies and implantation It is applied as a Unit to the task.  The Unit: France  |                           |         |  |
|             | Mobilization: Transportation of material and   |                           |         |  |
| 103         | lt is applied as a Unit to the task.  The Unit: France   |                           |         |  |
| 200         | DBHTIN   | 7 1110                    |         |  |
|             | Installation and Withdrawal of drilling rig and  | WORKS                     |         |  |
| 201         | other equipment It is applied as a Unit to the task. The Unit:   |                           |         |  |
|             | Air Rotary Drilling of Ø 9"7/8 in unconsolidated   |                           |         |  |
| 202         | It is applied as a Linear Meter to the task.  The Linear Meter:  |                           |         |  |
|             | Installation and removal of  |                           |         |  |
| 203         | Installation and removal of temporal PVC or metallic casing of @ 175-195mm It is applied as a Linear Meter to the task.  The Linear Meter:                                 |                           |         |  |
|             | Air Potany and P   |                           |         |  |
| 204         | Air Rotary and Percussion Drilling with the down-<br>the -hole hammer of 0 6" ½ 10 6" ¾) in hard rock<br>It is applied as a Linear Meter to the task.<br>The Linear Meter: |                           |         |  |
| 00          | DESIGN CLEANING  |                           |         |  |
|             | DESIGN, CLEANING, DEVELOP Supply and installation of PVC agains of O. 112  | MENT AND PUMPIN           | G TEST  |  |
| 01          | 125mm<br>It is applied as a Linear Meter to the task. The Linear Meter:  |                           |         |  |
| 1           | Supply and installation of PVC screen of $O$ 112 – 125mm with slot openings of $O$ $\leq$ 2mm  |                           |         |  |
| 7           | t is applied as a Linear Meter to the task.  The Linear Meter:   |                           |         |  |
| 9           | Supply and putting in place of a gravel pack of a quartzeous nature and calibrated: (1 - 2mm) or   |                           |         |  |
| It          | 2-4mm) is applied as a Linear Meter to the task.   |                           |         |  |

| Putting in place of the borehole cap It is applied as a Unit to the task. The Unit: CFA  Cleaning and development of the borehole by the air lift method It is applied as a Unit to the task. The Unit: CFA  Pumping and recharge test[Aquifer test] It is applied as a Unit to the task. The Unit: CFA  Sampling and physico-chemical Analysis of water from the borehole It is applied as a Unit to the task. The Unit: CFA  Disinfection of the borehole It is applied as a Unit to the task. The Unit: CFA  SOLAR PUMP INSTALLATION  Purchase and installation of a submersible solar |     |
|---|-----|
| Cleaning and development of the borehole by the air lift method It is applied as a Unit to the task.  The Unit:  CFA  Pumping and recharge test[Aquifer test] It is applied as a Unit to the task The Unit:  CFA  Sampling and physico-chemical Analysis of water from the borehole It is applied as a Unit to the task. The Unit:  CFA  Disinfection of the borehole It is applied as a Unit to the task. The Unit:  CFA  SOLAR PUMP INSTALLATION  Purchase and installation of a submersible solar  |     |
| air lift method It is applied as a Unit to the task.  The Unit:  CFA  Pumping and recharge test[Aquifer test] It is applied as a Unit to the task.  The Unit:  CFA  Sampling and physico-chemical Analysis of water from the borehole It is applied as a Unit to the task.  The Unit:  CFA  Disinfection of the borehole It is applied as a Unit to the task.  The Unit:  CFA  SOLAR PUMP INSTALLATION  Purchase and installation of a submersible solar  |     |
| It is applied as a Unit to the task.  The Unit: CFA  Sampling and physico-chemical Analysis of water from the borehole It is applied as a Unit to the task. The Unit: CFA  Disinfection of the borehole It is applied as a Unit to the task. The Unit: CFA  SOLAR PUMP INSTALLATION  Purchase and installation of a submersible solar   |     |
| from the borehole It is applied as a Unit to the task. The Unit: Francs CFA  Disinfection of the borehole It is applied as a Unit to the task. The Unit: Francs CFA  SOLAR PUMP INSTALLATION  Purchase and installation of a submersible solar  |     |
| 308 It is applied as a Unit to the task.  The Unit: CFA  SOLAR PUMP INSTALLATION  Purchase and installation of a submersible solar  |     |
| Purchase and installation of a submersible solar  |     |
| Purchase and installation of a submersible solar  |     |
| pump with a flow rate of 4.2m3/h and TMH of ≥100m; P≥2200w It is applied as a Unit to the task. The Unit: France  |     |
| Supply and installation of PV Panels. Wp 325W, monocrystalline with all accessories to be mounted on the top of the tank It is applied as a Unit to the task. The Unit:  CF4  Supply and installation of PV Panels. Wp 325W, monocrystalline with all accessories to be frances  Frances  |     |
| Installation of automatic control system with all necessary accessories for the pumping system  It is applied as a lump sum to the task.  The Lump Sum:  CFA  Installation of automatic control system with all necessary accessories for the pumping system  It is applied as a lump sum to the task.  France  |     |
| 500 PIPELINE INSTALLATION   |     |
| Supply and laying of PVC or Panaflex Pipe  040mm NP10 to pump water from the borehole to the elevated storage tank It is applied as a Linear Meter to the task.  The Linear Meter:  CFA   |     |
| Supply and laying of PVC Ø63mm NP10 It is applied as a Linear Meter to the task.  The Linear Meter:  CEA  Francs  |     |
| Supply and laying of PVC 40mm NP10 It is applied as a Linear Meter to the task.  503 The Linear Meter: France   |     |
| Pipeline excavation and backfill It is applied as a Linear Meter to the task.  The Linear Meter:  France  |     |
| 600 REHABILITATION OF STORAGE T   | ANK |

| 601 | Rehabilitation of the existing Scan Water storage tank of 40m3 and fencing of 15m x 15m with wiremesh on 60x60 angle bars placed 3m spacing. It is applied as a Unit to the task. The Unit: Francs |
|-----|--|
| 602 | Construction of public stand pipes with valve chambers It is applied as a Unit to the task. The Unit: France   |
| 603 | Rehabilitation of public stand pipes with valve chambers It is applied as a Unit to the task. The Unit: France   |
| 700 | HVDD   |
|     | Plumbing accessories HYDRAULICS ACCESSORIES  |
| 701 | It is applied as a lump sum to the task.  The Lump Sum:  |
| 702 | Supply of a plumbing tool box It is applied as a Unit to the task. The Unit: France  |
| 800 | PHTTING NETWORK AND  |
| 801 | Water tightness test It is applied as a lump sum to the task. The Lump Sum: France   |
| 802 | Training of two maintenance technicians It is applied as a session to the task. The Session: Francs CFA  |
| 303 | Production of final execution plan It is applied as a lump sum to the task.  The Lump Sum: Francs  Francs  Francs  |

COMPANY: