



REPUBLIC OF THE PHILIPPINES
NATIONAL POWER CORPORATION
(Pambansang Korporasyon sa Elektrisidad)

BID DOCUMENTS

**Name of Project : CONCRETING OF PATHWALK FROM FOREBAY TO
DAM AT BALONGBONG HEPP**

Location : BALONGBONG, BATO, CATANDUANES

Specs No. : LuzP21Z1265Sc | S1-BHP22-0D2

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Design and Development Department



SECTION I

INVITATION TO BID



National Power Corporation

INVITATION TO BID

PUBLIC BIDDING – BCS 2022-0110

1. The NATIONAL POWER CORPORATION (NPC), through its approved Corporate Budget of CY 2022 intends to apply the sum of **(Please see schedule below)** being the Approved Budget for the Contract (ABC) to payments under the contract. Bids received in excess of the ABC shall be automatically rejected at Bid opening.

PR Nos./PB Ref No. & Description	Similar Contracts	Pre-bid Conference	Bid Submission / Opening	ABC/ Amt. of Bid Docs
HO-PIB22-002 / PB220323-AD00038 Construction of Additional Breasting Structures for Power Barge 120 at Balanacan Port, Mogpog, Marinduque • PCAB License: License Category of at least "Category D – General Engineering" and registration classification of at least "Small B – Port, Harbor or Offshore Engineering"	Construction / Rehabilitation of Mooring Facilities, Piers, Port Terminal or Loading / Unloading Jetty	11 March 2022 9:30 A.M	23 March 2022 9:30 A.M	P 5,466,000.00 / P 10,000.00
S1-BHP22-002 / PB220323-AD00039 Concreting of Pathwalk from Forebay to Dam at Balongbong HEPP, Balongbong, Bato, Catanduanes • PCAB License: License Category of at least "Category D – General Building" and registration classification of at least "Small B – Building & Industrial Plant"	Concreting / Construction of Pathway, Walkway or Pedestrian Road or Similar Structures	11 March 2022 9:30 A.M	23 March 2022 9:30 A.M	P 6,516,000.00 / P 10,000.00
Venue: Kañao Function Room, NPC Bldg. Diliman, Quezon City				

2. The NPC now invites bids for Items listed above. Delivery of the Goods is required (see table below) specified in the Technical Specifications. Bidders should have completed, within (see table below) from the date of submission and receipt of bids, a contract similar to the Project. The description of an eligible bidder is contained in the Bidding Documents, particularly, in Section II. (Instruction to Bidders).

PR No/s. / PB Ref No/s.	Delivery Period / Contract Duration	Relevant Period of SLCC reckoned from the date of submission & receipt of bids
HO-PIB22-002	Forty-Five (45) Calendar Days	-
S1-BHP22-002	Forty-Five (45) Calendar Days	-

3. Bidding will be conducted through open competitive bidding procedures using a non-discretionary "pass/fail" criterion as specified in the 2016 revised Implementing Rules and Regulations (IRR) of Republic Act (RA) No. 9184.

Bidding is restricted to Filipino citizens/sole proprietorships, partnerships, or organizations with at least sixty percent (60%) interest or outstanding capital stock belonging to citizens of the Philippines, and to citizens or organizations of a country the laws or regulations of which grant similar rights or privileges to Filipino citizens, pursuant to RA 5183.

4. Prospective Bidders may obtain further information from National Power Corporation, Bids and Contracts Services Division and inspect the Bidding Documents at the address given below during office hours (8:00AM to 5:00PM), Monday to Friday.
5. A complete set of Bidding Documents may be acquired by interested Bidders from the given address and website(s) and upon payment of the applicable fee for the Bidding Documents, pursuant to the latest Guidelines issued by the GPPB. Bidding fee may be refunded in accordance with the guidelines based on the grounds provided under Section 41 of R.A. 9184 and its Revised IRR.
6. The National Power Corporation will hold Pre-Bid Conference (**see table above**) and/or through video conferencing or webcasting which shall be open to prospective bidders.

Only registered bidder/s shall be allowed to participate for the conduct of virtual pre-bid conference. **Unregistered bidders** may attend the Pre-Bid Conference at the Kañao Room, NPC subject to the following:

- Only a maximum of two (2) representatives from each bidder / company shall be allowed to participate during the virtual pre-bid conference.
 - A "No Face mask / No Full Face Shield / No Entry" policy shall be implemented in the NPC premises. Face mask shall be 3-ply surgical or KN95 mask type.
 - The requirements herein stated including the medium of submission shall be subject to GPPB Resolution No. 09-2020 dated 07 May 2020
 - The Guidelines on the Implementation of Early Procurement Activities (EPA) shall be subject to GPPB Circular No. 06-2019 dated 17 July 2019
7. Bids must be duly received by the BAC Secretariat through (i) manual submission at the office address indicated below; (ii) online or electronic submission before the specified time stated in the table above for opening of bids. Late bids shall not be accepted.
8. All Bids must be accompanied by a bid security in any of the acceptable forms and in the amount stated in ITB Clause 14.
9. Bid opening shall be on Kañao Function Room, NPC Head Office, Diliman, Quezon City and/or via online platform to be announced by NPC. Bids will be opened in the presence of the bidders' representatives who choose to attend the activity.
10. The National Power Corporation reserves the right to reject any and all bids, declare a failure of bidding, or not award the contract at any time prior to contract award in accordance with Sections 35.6 and 41 of the 2016 revised IRR of R.A. No. 9184, without thereby incurring any liability to the affected bidder or bidders.

11. For further information, please refer to:

**Bids and Contracts Services Division,
Logistics Department**

BIR Road cor. Quezon Avenue

Diliman, Quezon City

Tel Nos.: 8924-5211 and 8921-3541 local 5239

Fax No.: 8922-1622

Email: bcsd@napocor.gov.ph / bcsd_napocor@yahoo.com

12. You may visit the following websites:

For downloading of Bidding Documents: <https://www.napocor.gov.ph/bcsd/bids.php>



ATTY. ROGEL T. TEVES
Vice President, Power Engineering Services and
Chairman, Bids and Awards Committee

SECTION II

INSTRUCTION TO BIDDERS

SECTION II - INSTRUCTIONS TO BIDDERS**TABLE OF CONTENTS**

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SECTION II - INSTRUCTIONS TO BIDDERS

1. Scope of Bid

NPC invites Bids for the **CONCRETING OF PATHWAY FROM FOREBAY TO DAM AT BALONGBONG HEPP**, with Project Identification Number **LuzP21Z1265Sc**.

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

2. Funding Information

The GOP through the source of funding as indicated below for CY 2022 in the amount of **SIX MILLION FIVE HUNDRED SIXTEEN THOUSAND PESOS (P 6,516,000.00)**. The source of funding is the proposed Corporate Operating Budget of the National Power Corporation (NPC).

3. Bidding Requirements

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

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

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

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

The Procuring Entity, as well as the Bidders and Contractors, shall observe the highest standard of ethics during the procurement and execution of the contract. They or through an agent shall not engage in corrupt, fraudulent, collusive, coercive, and obstructive practices defined under Annex "I" of the 2016 revised IRR of RA No. 9184 or other integrity violations in competing for the Project.

5. Eligible Bidders

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

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

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

6. Origin of Associated Goods

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

7. Subcontracts

- 7.1. The Bidder may subcontract portions of the Project to the extent allowed by the Procuring Entity as stated herein, but in no case more than fifty percent (50%) of the Project.
- 7.1. The Bidder must submit together with its Bid the documentary requirements of the subcontractor(s) complying with the eligibility criteria stated in ITB Clause 5 in accordance with Section 23.4 of the 2016 revised IRR of RA No. 9184 pursuant to Section 23.1 thereof.
- 7.2. Subcontracting of any portion of the Project does not relieve the Contractor of any liability or obligation under the Contract. The Supplier will be responsible for the acts, defaults, and negligence of any subcontractor, its agents, servants, or workmen as fully as if these were the Contractor's own acts, defaults, or negligence, or those of its agents, servants, or workmen.

8. Pre-Bid Conference

The Procuring Entity will hold a pre-bid conference for this Project on the specified date and time and either at its physical address and/or through videoconferencing/webcasting as indicated in paragraph 6 of the IB.

9. Clarification and Amendment of Bidding Documents

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

10. Documents Comprising the Bid: Eligibility and Technical Components

- 10.1. The first envelope shall contain the eligibility and technical documents of the Bid as specified in Form NPCSF-INFR-01 - Checklist of Technical and Financial Documents, Section VIII - Bidding Forms.
- 10.2. If the eligibility requirements or statements, the bids, and all other documents for submission to the BAC are in foreign language other than English, it must be accompanied by a translation in English, which shall be authenticated by

the appropriate Philippine foreign service establishment, post, or the equivalent office having jurisdiction over the foreign bidder's affairs in the Philippines. For Contracting Parties to the Apostille Convention, only the translated documents shall be authenticated through an apostille pursuant to GPPB Resolution No. 13-2019 dated 23 May 2019. The English translation shall govern, for purposes of interpretation of the bid.

- 10.3. A valid PCAB License is required, and in case of joint ventures, a valid special PCAB License, and registration for the type and cost of the contract for this Project. Any additional type of Contractor license or permit shall be indicated in the BDS.
- 10.4. A List of Contractor's key personnel (e.g., Project Manager, Project Engineers, Materials Engineers, and Foremen) assigned to the contract to be bid, with their complete qualification and experience data shall be provided. These key personnel must meet the required minimum years of experience set in the BDS.
- 10.5. A List of Contractor's major equipment units, which are owned, leased, and/or under purchase agreements, supported by proof of ownership, certification of availability of equipment from the equipment lessor/vendor for the duration of the project, as the case may be, must meet the minimum requirements for the contract set in the BDS.

11. Documents Comprising the Bid: Financial Component

- 11.1. The second bid envelope shall contain the financial documents for the Bid as specified in **Form NPCSF-INFR-01 - Checklist of Technical and Financial Documents, Section VIII - Bidding Forms.**
- 11.2. Any bid exceeding the ABC indicated in paragraph 1 of the IB shall not be accepted.
- 11.3. For Foreign-funded procurement, a ceiling may be applied to bid prices provided the conditions are met under Section 31.2 of the 2016 revised IRR of RA No. 9184.

12. Alternative Bids

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

13. Bid Prices

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

14. Bid and Payment Currencies

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

14.2. Payment of the contract price shall be made in Philippine Pesos.

15. Bid Security

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

15.2. The Bid and bid security shall be valid until **One Hundred Twenty (120) calendar days** from the date of opening of bids. Any bid not accompanied by an acceptable bid security shall be rejected by the Procuring Entity as non-responsive.

16. Sealing and Marking of Bids

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

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

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

17. Deadline for Submission of Bids

The Bidders shall submit on the specified date and time and either at its physical address or through online submission as indicated in paragraph 7 of the IB.

18. Opening and Preliminary Examination of Bids

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

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

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

19. Detailed Evaluation and Comparison of Bids

- 19.1. The Procuring Entity's BAC shall immediately conduct a detailed evaluation of all Bids rated *"passed"* using non-discretionary pass/fail criteria. The BAC shall consider the conditions in the evaluation of Bids under Section 32.2 of 2016 revised IRR of RA No. 9184.
- 19.2. If the Project allows partial bids, all Bids and combinations of Bids as indicated in the BDS shall be received by the same deadline and opened and evaluated simultaneously so as to determine the Bid or combination of Bids offering the lowest calculated cost to the Procuring Entity. Bid Security as required by ITB Clause 15 shall be submitted for each contract (lot) separately.
- 19.3. In all cases, the NFCC computation pursuant to Section 23.4.2.6 of the 2016 revised IRR of RA No. 9184 must be sufficient for the total of the ABCs for all the lots participated in by the prospective Bidder.

20. Post Qualification

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

21. Signing of the Contract

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

SECTION III

BID DATA SHEET



SECTION III - BID DATA SHEET

ITB Clause	
5.2	<p>For this purpose, contracts similar to the Project refer to contracts which have the same major categories of work, which shall be projects involving concreting/construction of pathway, walkway or pedestrian road or similar structures.</p> <p>The Single Largest Completed Contract (SLCC) as declared by the bidder shall be verified and validated to ascertain such completed contract. Hence, bidders must ensure access to sites of such projects/equipment to NPC representatives for verification and validation purposes during post-qualification process.</p> <p>It shall be a ground for disqualification, if verification and validation cannot be conducted for reasons attributable to the Bidder.</p>
7.1	<p>Only a maximum of fifty percent (50%) of the Works may be subcontracted. All Subcontractors must be approved by NPC.</p>
10.1	<p>The list of on-going contracts (Form No. NPCSF-INFR-02) shall be supported by the following documents for each on-going contract to be submitted during Post-Qualification:</p> <ol style="list-style-type: none"> 1. Contract/Purchase Order and/or Notice of Award 2. Certification coming from the project owner/client that the performance is satisfactory as of the bidding date. <p>The bidder shall declare in this form all his on-going government and private contracts including contracts where the bidder (either as individual or as a Joint Venture) is a partner in a Joint Venture agreement other than his current joint venture where he is a partner. Non declaration will be a ground for disqualification of bid.</p>
	<p>The Statement of the bidder's Single Largest Completed Contract (SLCC) similar to the contract to be bid (Form No. NPCSF-INFR-03) shall be supported by the following documents to be submitted during Bid Opening:</p> <ol style="list-style-type: none"> 1. Contract/Purchase Order 2. Owner's Certificate of Final Acceptance issued by the project owner other than the contractor or a final rating of at least Satisfactory in the Constructors Performance Evaluation System (CPES). In case of contracts with the private sector, an equivalent document (Ex. Official Receipt or Sales Invoice) shall be submitted.
10.3	<p>The required License issued by the Philippine Contractors Accreditation Board (PCAB): License Category of at least "CATEGORY D – GENERAL BUILDING" and registration classification of at least "SMALL B – BUILDING & INDUSTRIAL PLANT"</p>

10.4	<p>The list of key personnel shall include the following minimum requirements:</p> <p>a. One (1) Project/Site Engineer</p> <p>Registered Civil Engineer who had supervised at least a project similar in nature as to the type and cost of the proposed project within the last 10 years. Must have at least 3 years professional experience as Civil Engineer on similar project.</p> <p>b. One (1) Materials Engineer</p> <p>Registered Civil Engineer with valid accreditation from the Department of Public Works and Highways (DPWH) as Materials Engineer I</p> <p>c. One (1) Safety Officer 2</p> <p>Construction Safety Officer who has completed at least forty (40) hours of Construction Safety and Health Training (COSH) from Occupational Safety and Health Center (OSHC) or Safety Training Organizations (STOs) accredited by the Department of Labor and Employment (DOLE)</p> <p>Valid Professional Regulations Commission (PRC) license for professional personnel, Construction Safety and Health Training Certificate from OSHC/STOs accredited by DOLE for the Safety Officer, certificate of accreditation including ID card issued by DPWH for Materials Engineer, shall be submitted and included as an attachment in the Standard Form NPCSF-INFR-09: List of Key Personnel Proposed to be Assign to the Contract.</p> <p>The above key personnel must either be employed by the Bidder or contracted by the Bidder to be employed for the contract to be bid.</p>
10.5	<p>The list of construction equipment (owned or leased) shall include the following minimum requirements:</p> <p>a. Bar cutter (at least 25mmØ capable) - 1 unit</p> <p>b. Concrete Mixer (at least 1 - bagger) - 1 unit</p>
10.6	<p>Bidders shall also submit the following requirements in their first envelope, Eligibility and Technical Component of their bid:</p> <p>1. Complete eligibility documents of the proposed sub-contractor, if any</p>
10.7	<p>The prospective bidders shall declare its Joint Venture partner during the purchase of bid/tender documents. Any single bidder/s who already procured/secured the bidding documents but want to avail the Joint Venture Agreement (JVA) shall inform the BAC in writing prior to the bid opening for records and documentation purposes. Failure to do so shall be a ground for disqualification/non-acceptance of its bid.</p>
12	No further instructions
15.1	<p>The bid security shall be in the form of a Bid Securing Declaration or any of the following forms and amounts:</p> <p>1. The amount of not less than 2% of ABC, if bid security is in cash, cashier's/manager's check, bank draft/guarantee or irrevocable letter of credit;</p> <p>2. The amount of not less than 5% of ABC if bid security is in Surety Bond.</p>

19.2	Partial Bid is not allowed
20	<p>a. Contract/Purchase Order and/or Notice of Award for the contracts stated in the List of all Ongoing Government & Private Contracts Including Contracts Awarded but not yet Started (NPCSF-INFR-02);</p> <p>b. Certification coming from the project owner/client that the performance is satisfactory as of the bidding date for all ongoing contracts stated in form NPCSF-INFR-02.</p> <p>c. The licenses and permits relevant to the Project and the corresponding law requiring it as specified in the Technical Specifications, if any.</p>
21	<p>The following documents shall form part of the contract:</p> <ol style="list-style-type: none">1. Notice to Proceed2. Construction schedule and S-curve3. Manpower Schedule4. Construction Methods5. Equipment Utilization Schedule6. Construction safety and health program of the contractor duly approved by the Bureau of Working Condition (BWC) of the Department of Labor and Employment (DOLE) or proof of submission to BWC7. PERT/CPM.

SECTION IV

GENERAL CONDITIONS OF CONTRACT

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SECTION IV – GENERAL CONDITIONS OF CONTRACT

1. Scope of Contract

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

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

2. Sectional Completion of Works

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

3. Possession of Site

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

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

4. The Contractor's Obligations

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

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

5. Performance Security

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

6. Site Investigation Reports

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

7. Warranty

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

8. Liability of the Contractor

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

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

9. Termination for Other Causes

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

10. Dayworks

Subject to the guidelines on Variation Order in Annex "E" of the 2016 revised IRR of RA No. 9184, and if applicable as indicated in the SCC, the Dayworks rates in the Contractor's Bid shall be used for small additional amounts of work only when the

Procuring Entity's Representative has given written instructions in advance for additional work to be paid for in that way.

11. Program of Work

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

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

12. Instructions, Inspections and Audits

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

13. Advance Payment

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

14. Progress Payments

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

15. Operating and Maintenance Manuals

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

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

SECTION V

SPECIAL CONDITIONS OF CONTRACT



SECTION V – SPECIAL CONDITIONS OF CONTRACT

GCC Clause	
2	Sectional completion is not specified.
4	<p data-bbox="443 427 1382 533">It shall also be the obligation and responsibility of the Contractor to carry out the Works properly and in accordance with this Contract, including but not limited to the following conditions:</p> <p data-bbox="443 539 1382 734">a. The Contractor shall conduct the Works with due regard to safety and health in accordance with its Construction Safety and Health Program (CSHP) duly approved by the Department of Labor & Employment (DOLE) and in compliance with the DOLE Department Order No. 13 – The Guidelines Governing Occupational Safety and Health in the Construction Industry.</p> <p data-bbox="443 741 1382 875">Failure to comply with the approved CSHP will be considered as non-compliance with the Contract and shall result to the imposition of Section 19, Violation and Penalties of the DOLE Department Order No. 13 and any appropriate sanctions such as, but not limited to:</p> <ol data-bbox="475 882 1382 1189" style="list-style-type: none"> 1. Suspend the work until the Contractor complies with the approved CSHP with the condition that the work resumption will not incur additional cost to the Corporation; 2. Suspend payment of the portion of work under question; 3. Correct the situation by employing 3rd party and charge all expenses incurred to the Contractor's collectibles/securities; and 4. Report the condition to the Bureau of Working Conditions of the DOLE for their appropriate action. <p data-bbox="443 1196 1382 1435">b. The Contractor shall be responsible for the strict compliance with the provision of the Philippine Laws affecting labor and operation of Work under the contract and shall be responsible for the payment of all indemnities arising out of any labor accident which may occur in the execution of the Works and for which he may be responsible under Republic Act 3428, as amended, known as the Workmen's Compensation Law.</p> <p data-bbox="443 1442 1382 1608">c. The Contractor is obliged to exercise due care so as not to endanger life and property in the vicinity of the Works where he operates in connection with this Contract. He shall be liable for all damages incurred in any manner by acts of negligence of his own, or his agents, employees, or workmen.</p> <p data-bbox="443 1615 1382 1854">d. It is the responsibility of the Contractor for the strict compliance with the requirements of the Philippine Clean Air Act of 1999 (R.A. 8749) and Philippine Clean Water Act of 2004 (R.A. 9275). The Contractor shall be liable for any damages/destructions to the environment including penalties that will be imposed by the Department of Environment and Natural Resources (DENR) arising from non-compliance of the requirements thereof.</p> <p data-bbox="443 1861 1382 2018">e. The Contractor shall be responsible for the strict compliance with the requirements of the Environmental Compliance Certificate (ECC) issued for this project (if any) and DENR Administrative Order No. 26. He shall be liable for any damages/destructions to the environment including penalties that will be imposed by the DENR arising from</p>

	<p>non-compliance thereof, in any manner by his acts or negligence, or by his agents, employees, or workmen in the execution of the Works. The Contractor may employ a Pollution Control Officer accredited with the DENR for the duration of the project, if so required by the DENR Administrative Order No. 26</p> <p>f. It shall be the Contractor's responsibility for the correctness, accuracy and quality of works. NPC's approval does not relieve his contractual obligation and responsibility under this contract.</p> <p>g. Payment of all forms of taxes, such as value added tax (VAT) including municipal licenses and permits, and others that may be imposed by the Philippine Government or any of its agencies and political subdivisions in connection with the Contract shall be for the account of the Contractor.</p> <p>h. In general, the Contractor is totally responsible for the execution of the Works and therefore, takes upon himself all the technical, legal and economic risks and all obligations which could arise therefrom or connected therewith. The overall responsibility of the Contractor includes the responsibility for actions or omissions of his own personnel as well as the personnel of the sub-contractors.</p>
4.1	NPC shall give access to the Site for the Contractor to commence and proceed with the works on the start date. The access to the site referred herein shall not be exclusive to the Contractor but only to enable him to execute the Work.
5	<p>1. The following must be indicated in the performance bond to be posted by the Contractor:</p> <ul style="list-style-type: none"> i. Company Name ii. Correct amount of the Bond iii. Contract/Purchase Order Reference Number iv. Purpose of the Bond: "To guarantee the faithful performance of the Principal's obligation to undertake <u>(Contract/Purchase Order Description)</u> in accordance with the terms and conditions of <u>(Contract No. & Schedule/Purchase Order No.)</u> entered into by the parties." <p>2. The bond shall remain valid and effective until the duration of the contract <u>(should be specific date reckoned from the contract effectivity)</u> plus sixty (60) days after NPC's acceptance of the last delivery/final acceptance of the project.</p> <p>3. In case of surety bond, any extension of the contract duration or delivery period granted to the CONTRACTOR shall be considered as given, and any modification of the contract shall be considered as authorized, as if with the expressed consent of the surety, provided that such extension or modifications falls within the effective period of the said surety bond. However, in the event that the extension of the contract duration or delivery schedule would be beyond the effective period of the surety bond first posted, it shall be the sole obligation of the CONTRACTOR to post an acceptable Performance Security within ten (10) calendar days after the contract duration/delivery period extension has been granted by NPC.</p> <p>4. Other required conditions in addition to the standard policy terms issued by the Bonding Company:</p>

	<p>i. The bond is a penal bond, callable on demand and the entire amount thereof shall be forfeited in favor of the Obligees upon default of the Principal without the need to prove or to show grounds or reasons for demand for the sum specified therein;</p> <p>ii. The amount claimed by the Obligees under this bond shall be paid in full and shall never be subject to any adjustment by the Surety;</p> <p>iii. In case of claim, the Surety shall pay such claim within sixty (60) days from receipt by the Surety of the Obligees' notice of claim/demand letter notwithstanding any objection thereto by the Principal.</p>
6	No site investigation report.
7.2	<p>In case of permanent structures, such as buildings of types 4 and 5 as classified under the National Building Code of the Philippines and other structures made of steel, iron, or concrete which comply with relevant structural codes (e.g., DPWH Standard Specifications), such as, but not limited to, steel/concrete bridges, flyovers, aircraft movement areas, ports, dams, tunnels, filtration and treatment plants, sewerage systems, power plants, transmission and communication towers, railway system, and other similar permanent structures: Fifteen (15) years.</p> <p>In case of semi-permanent structures, such as buildings of types 1, 2, and 3 as classified under the National Building Code of the Philippines, concrete/asphalt roads, concrete river control, drainage, irrigation lined canals, river landing, deep wells, rock causeway, pedestrian overpass, and other similar semi-permanent structures: Five (5) years.</p> <p>In case of other structures, such as Bailey and wooden bridges, shallow wells, spring developments, and other similar structures: Two (2) years.</p>
10	No dayworks are applicable to the contract.
11.1	The Contractor shall submit the Program of Work to the Procuring Entity's Representative within Ten (10) calendar days of delivery of the Notice of Award/Letter of Acceptance.
11.2	<p>The period between Program of Work updates is Thirty (30) calendar days.</p> <p>The amount to be withheld for late submission of an updated Program of Work is One percent (1%) of contract amount.</p>
12	<p>During contract implementation, the Procuring Entity shall conduct Constructors Performance Evaluation in accordance with Section 12, Annex E of the Revised Implementing Rules and Regulation of R.A. 9184 using the NPC Constructors Performance Evaluation System (CPES) Guidelines.</p> <p>CPES ratings shall be used for the following purposes: a) eligibility screening/post-qualification; b) awarding of contracts; c) project monitoring & control; d) Issuance of Certificate of Completion; and in adopting measures to further improve performance of contractors in the prosecution of government projects.</p> <p>Qualified Constructors Performance Evaluators (CPE) shall conduct project evaluation as follows:</p>

	<p>(a) During Construction - Except for those projects with a duration of 90 calendar days and below which may be subjected to at least one (1) visit, all projects shall be subjected to a minimum of two (2) evaluations to be performed by the CPE. The number of evaluations beyond the prescribed minimum shall be determined by the CPES-Implementing Unit based on the size, nature and complexity of the project and shall be subject to approval by the proper authorities within the agency. The first evaluation shall be performed when the project is at least thirty percent (30%) physically complete or as maybe required by the CPES-IU using the S-curve or other appropriate means to determine whether there is substantial work completed for evaluation.</p> <p>(b) Upon Completion - only one evaluation shall be performed by the CPE right after the Project Implementation Group reports one hundred percent (100%) completion of the project.</p>
13	The maximum amount of advance payment is fifteen percent (15%) of the Contract Price and paid in lump sum.
14	No further instructions.
15.1	The date by which "as built" drawings and operating and maintenance manuals are required is within thirty (30) calendar days after completion of contract.
15.2	The amount to be withheld for failing to produce "as built" drawings and/or operating and maintenance manuals by the date required is Five percent (5%) of contract amount.

SECTION VI

TECHNICAL SPECIFICATIONS

SECTION VI

**TECHNICAL
SPECIFICATIONS**

GENERAL WORKS



SECTION VI - TECHNICAL SPECIFICATIONS**GW – GENERAL WORKS****TABLE OF CONTENTS**

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SECTION VI - TECHNICAL SPECIFICATIONS**GW – GENERAL WORKS****GW-1.0 PROJECT HIGHLIGHTS****GW-1.1 General**

This section covers the general technical requirements for furnishing all supervision, labor, materials, supplies, tools and equipment in accordance with specifications contained herein and as shown on the accompanying drawings to complete the **CONCRETING OF PATHWALK FROM FOREBAY TO DAM AT BALONGBONG HEPP**

GW-1.2 Project Location

The project is located at Balongbong HEPP, Bato Catanduanes.

GW-1.3 Scope of Work

The works and services to be performed under this Contract shall essentially consist of, but not limited to the following:

Civil Works

- a) Moving-in including furnishing, supervision, construction, operation and maintenance of general construction facilities and moving-out thereof after completion and acceptance;
- b) Clearing and Grubbing, unsuitable excavation and sand and gravel fill;
- c) Complete construction of 2-kilometer concrete pathwalk from forebay to dam and
- d) All other works and services required to complete the project

GW-1.4 Contract Period

The Contractor shall complete the works as herein specified within Forty Five (45) calendar days. The contract period is inclusive of Five (5) unworkable days considered unfavorable for the execution of the works. The total contract duration shall be reckoned from the date of contract effectivity as specified in the **Notice to Proceed**.

GW-1.5 Contractor's Classification

License Category of at least **"CATEGORY D – GENERAL BUILDING"** and registration classification of at least **"SMALL B – BUILDING & INDUSTRIAL PLANT"**.

GW-1.6 Minimum Required Personnel

For the duration of the contract, the Contractor shall have the following minimum required personnel assigned to the project:



a. One (1) Project Engineer

Registered Civil Engineer who had supervised at least a project similar in nature as to the type and cost of the proposed project within the last 10 years. Must have at least 3 years professional experience as Civil Engineer on similar project.

b. One (1) Materials Engineer

Registered Civil Engineer with valid accreditation from the Department of Public Works and Highways (DPWH) as Materials Engineer I.

c. One (1) Safety Officer 2

Construction Safety Officer who has completed at least forty (40) hours of Construction Safety and Health Training (COSH) from Occupational Safety and Health Center (OSHC) or Safety Training Organizations (STOs) accredited by the Department of Labor and Employment (DOLE).

Valid Professional Regulations Commission (PRC) license for professional personnel. Construction Safety and Health Training Certificate from OSHC/STOs accredited by DOLE for the Safety Officer, certificate of accreditation including ID card issued by DPWH for Materials Engineer, shall be submitted and included as an attachment in the Standard Form NPCSF-INFR-09 List of Key Personnel Proposed to be Assign to the Contract.

The above key personnel must either be employed by the Bidder or contracted by the Bidder to be employed for the contract to be bid.

GW-1.7 Minimum Required Construction Equipment

The list of construction equipment (owned or leased) shall include the following:

- | | |
|--------------------------------------|----------|
| a. Bar cutter (25 mm Φ capable) | - 1 unit |
| b. Concrete Mixer (1 bagger) | - 1 unit |

GW-2.0 GENERAL REQUIREMENTS**GW-2.1 Language and System of Measurement**

All documentation relative to this Contract shall be in English. Submitted drawings, literature, etc., which are not in English language will be considered as not submitted at all.

Metric units shall be used in all documents, correspondence, technical schedules and drawings. On drawings or printed pamphlets where other units have been used, the metric equivalent shall be marked in addition.

GW-2.2 Correspondence

Actions or responses to all communications pertaining to this Contract shall be addressed to:



The Manager, Project Management Department
National Power Corporation
BIR Road corner Quezon Avenue,
Diliman, Quezon City

The Contractor shall maintain a record of all correspondences that shall be accessible to NPC for information. The Contractor shall forward its correspondences to NPC in one (1) original.

All correspondences between NPC and the Contractor shall be numbered consecutively.

GW-2.3 Contractor's Organization and Personnel

GW-2.3.1 Organization

The Contractor shall maintain in the project site offices – for management, control and execution of the Contract – its organization and personnel required in GW (1.6) and as named in its proposal. Any changes in the organization and personnel shall be subject to the approval of NPC.

The Contractor shall maintain an up-to-date project organization chart, which shall be submitted to NPC for approval in the event of any changes.

GW-2.3.2 Personnel/Key Positions

Listed in GW (1.6) above comprises the Contractor's key personnel under this Contract. These key positions in the organization charts of the Contractor pertain to individuals assigned to management/supervisory positions, who at any time during the execution of the work can give decision and recommendation on matters pertaining to the proper and early completion of the Works.

The appointment, transfer and replacement of personnel to all key positions shall be subject to NPC's prior approval.

GW-2.4 Planning and Scheduling

GW-2.4.1 General

The Contractor shall be responsible for planning and scheduling, progress monitoring and reporting of all works and activities defined under this Contract.

Fifteen (15) days before the effectivity of the Contract, the Contractor shall submit for NPC approval a detailed work schedule using applicable project management tool(s) for monitoring project activity progress, such as a Critical Path Method (CPM) network or Project Evaluation and Review Technique (PERT) diagram.

The detailed work schedule shall show commencement and completion dates of the project's major activities and milestones.

GW-2.4.2 Format and Presentation

The Contractor shall prepare an activity network with the activities listed showing the following:



- (a) Activity code
- (b) Activity description
- (c) Duration in days

The Contractor shall also prepare a bar chart identifying all activities which cannot be performed without NPC's approval, and the need dates for NPC's decision thereof.

The Contract Schedule submitted shall meet the completion dates in the Construction Schedule and Schedule of Timings and shall clearly demonstrate the manner in which the various phases of the Works shall be completed.

All activities required for execution of the Works shall be carried out in accordance with the sequence and times and completion dates shown on the work schedule or subsequent revisions as approved by NPC.

GW-2.4.3 Progress Monitoring Principle and System

For the duration of the Contract, the Contractor shall monitor progress of the Works, and shall immediately advise NPC in advance of any anticipated delays in schedule, and the reason therefore.

If the Contractor believes it is necessary or advantageous to change the sequence of events shown on the Contract Schedule, he shall submit a proposed revision accompanied by a full explanation of the reasons and ramification of the change to NPC for approval. No change shall be made in the order in which the Works activities are being performed until NPC's approval for the revised Contract Schedule has been obtained.

Actual progress of each activity of the Works shall be updated and compared with the progress indicated on the approved Contract Schedule at least once every month by the Contractor.

After NPC approves the Contractor's detailed Contract Schedule and planned activity completion dates, the Contractor shall update and analyze the Contract Schedule on a monthly basis and submit updates to NPC on or before the 5th day of the following month.

The Contractor shall not change the sequence of activities shown on the approved Contract Schedule without NPC's prior approval.

GW-2.5 Documents to be Prepared by the Contractor

GW-2.5.1 General

All documents, calculations, certifications, manuals, drawings, etc. pertaining to the execution of all works that are to be prepared by the Contractor are listed hereunder. The Contractor's attention is drawn to various sections of the Specification, where detailed contents of the required documentation are specified.

GW-2.5.2 Detailed Drawings and Specifications

Whenever required in the Contract, the Contractor shall submit corresponding detailed fabrication drawings and applicable specifications

of structural and/or material assemblies (i.e., support structures of various electrical/mechanical equipment, components, etc.) supported by the corresponding design calculations.

The detailed drawings and specification shall include the following:

- As-stake site development plans/layout and/or general assembly drawings, as may be applicable
- Erection/Installation methodology indicating: 1) the various materials, equipment and tools to be used; 2) system and procedures; and 3) testing and commissioning
- Assembly drawings showing: 1) sectional views; 2) mounting details; 3) function of the assemblies; 4) adjustment and operating ranges; 5) concrete pedestals and foundation including bolts and anchorages; 6) field tolerances; 7) all field joints; and 8) methods of lubrication (if required)

GW-2.5.3 Final / As-Built Drawings

The Contractor shall furnish NPC a complete set of original copies of all drawings as finally approved and built – together with the electronic or soft copies of the said drawings in CDs, DVDs or other media types, and in format acceptable to NPC.

For all approved drawings with no subsequent revisions, the reproducible copies earlier furnished may be considered part of this set.

NPC will not release the final payment and the performance security until the foregoing conditions have been fulfilled.

GW-2.5.4 Presentation/Submission of Documents

The foregoing drawings and documents shall be submitted to NPC for approval.

In submitting the required documents, the Contractor must take into account the following:

- (a) Metric units shall be used in all documents, correspondence, technical schedules and drawings.
- (b) All drawings and copies thereof shall be submitted in five (5) sets, on A-3 size white paper and with black print unless otherwise agreed upon.
- (c) All drawings and similar documents shall be provided with clear space (approximately 80 mm x 50 mm) above the title block for NPC's stamping of "Approved" or "Approved with Corrections Indicated" or "Returned for Correction" that are defined as follows:
 - "Approved" or "A" mark authorizes the Contractor to proceed with the Work as indicated
 - "Approved with Corrections Indicated" or "AWCI" mark authorizes the Contractor to proceed with the Work with due consideration of the notes and/or comments/corrections



indicated therein and re-submit the drawings, specifications or designs for subsequent approval

- **"Returned for Correction" or "RFC"** mark requires the Contractor to make the corrections indicated and re-submit the corresponding drawings, specifications or designs for approval before commencing the Work indicated.

- (d) All other documents shall be similarly submitted in five (5) sets and in book bound form (or securely fastened).

Approval of the Contractor's drawings and other technical documents shall not be construed as the Contractor's relief of its obligations to meet all the requirements of this specification.

When revised drawings or drawings which have been returned to the Contractor marked **"Approved with Corrections Indicated"** or **"Returned for Correction"** are re-submitted for approval, the revision block shall be completed with the description and date of revision and the appropriate revision letter or numeral which shall be clearly indicated adjacent to the revision or modification which requires approval.

No revision affecting the design shall be made after a drawing has been **"Approved"** without re-submitting the drawings suitably revised for formal approval.

NPC will complete the review and approval of the Contractor's drawings within twenty (20) calendar days from the receipt of the respective documents at NPC's office mandated to act on those submittals. If within the same period, the Contractor has not received any response from NPC to that regard, the Contractor may proceed with the design and manufacture of equipment, materials or assemblies as if the drawings have been approved. The Contractor, however, is referred to the provision stated above regarding NPC approval of Contractor's drawings.

GW-3.0 MATERIALS AND EQUIPMENT

GW-3.1 General

All materials to be furnished by the Contractor shall be new and unused, free from defects and imperfections and best suited for its intended purpose. All materials shall comply with the latest revisions or editions of the specified standards or material specifications.

Certified mill test reports, as required in the relevant sections of this specification and the governing codes and standards, shall be furnished by the Contractor for NPC's record. Copies of each mill test report shall be submitted to NPC prior to procurement/fabrication of materials under consideration.

GW-3.2 Codes and Standards

All materials, equipment, fabrication, construction, installation, inspection and testing furnished shall conform to the latest specifications and provisions of engineering societies or other internationally accepted standards listed hereunder:



ACI	- American Concrete Institute
AISC	- American Institute of Steel Construction
ANSI	- American National Standard Institute
API	- American Petroleum Institute
ASME	- American Society of Mechanical Engineers
ASNT	- American Society of Non-Destructive Testing
ASTM	- American Society of Testing Materials
AWS	- American Welding Society
NPFA	- National Fire Protection Association
OSHA	- Occupational Safety Health Act of 1970
SSPC	- Steel Structures Painting Council

Other standards not mentioned above may be accepted provided that they ensure equal or higher quality; provided; further, that they meet the requirements of existing laws and regulations of the Government of the Republic of the Philippines.

In the event of any conflict among the above listed or other applicable codes and this Specification, Appendices and Attachments, the Contractor shall refer the conflict to NPC for written resolution. Otherwise, the responsibility shall be on the Contractor to show the suitability of any alternative standards he may wish to use without NPC approval.

In addition to the above codes and standards, the Contractor shall comply with all applicable state and local laws and regulations. The latest edition of each standard shall mean the latest edition available at the date of contract signing.

Other internationally recognized national standards may be accepted, if in the opinion of NPC, such will guarantee a quality not inferior to that guaranteed by the above standards. The list of these alternative standards which the Contractor proposes to adopt must be attached to his Bid for acceptance. In every case, the Contractor must list fully the standards they will conform to for this Contract.

All units, dimensions and calculations shall be in metric system.

GW-3.3 Test of Materials

All materials, parts and/or assemblies, to be used in the Works shall be tested conforming to the specifications and provisions of the approved and applicable standards for testing of materials. Results of the test shall be submitted to provide the means of determining compliance with the applicable specifications. All test or trials shall be made in the presence of NPC or his duly authorized representative unless NPC waived in writing its right to witness such test.

GW-3.4 Tropical Serviceability

GW-3.4.1 General

In choosing materials and their finishes, due regard shall be given to the humid tropical conditions and environment under which the equipment is to work, and the structures are to be built. Some relaxation of the following provisions may be permitted where equipment is hermetically sealed, but it



is preferred that tropical grade materials should be used wherever possible.

GW-3.4.2 Metals

Iron and steel, in general, are to be galvanized or painted, as appropriate or specified. Small iron and steel plate (other than SUS 316 stainless steel) of all instruments and devices, the metal parts or mechanisms are to be treated in an approved manner to prevent corrosion. Other components which are laminated, or which cannot be rust proofed, shall have all the expected parts thoroughly cleaned and heavily enameled, lacquered or compounded.

GW-3.5 Workmanship

Workmanship shall be of first-class quality and in accordance with the best modern engineering practice for construction of all civil works structures and the manufacture, assembly, test and commissioning of equipment and other components, notwithstanding any omissions from the specifications and drawings. To ensure quality workmanship, only technicians and competent workers, skilled in their respective trades, shall be employed.

GW-4.0 DRAWINGS**GW-4.1 Drawings Contained in the Tender Document**

All drawings referred to in this section shall be the Bid Drawings attached to the Tender Document unless specifically stated otherwise.

Discrepancies between the drawings and actual field conditions, or between drawings and specifications, shall be immediately brought to the attention of NPC for proper resolution. All works with apparent discrepancies shall not be started without NPC's formal approval.

Anything mentioned in these specifications and not shown on the drawings or shown in the drawings but not mentioned in the specifications but are obviously necessary to complete the works shall be considered and included as if they are both mentioned and shown.

Drawings and the specifications are complimentary to each other and what is called for in one shall be as binding as if called for both.

Bid drawings may be used for planning the work but shall not be used for construction purposes or for furnishing materials, unless authorized or approved by NPC. Bid Drawings, which show the work to be done as definitely and in as much detail as possible, may be used as guide by the Contractor to proceed in the performance of his work.

Drawings which require changes or adjustments to suit with the actual site conditions shall be prepared/submitted by the Contractor for NPC's review and approval.



GW-4.2 Contractor Drawings**GW-4.2.1 General**

Prior to the procurement of all materials, equipment and auxiliaries to be furnished under this contract, the Contractor shall submit for NPC's review, approval, and/or reference, five (5) copies of prints of detailed drawings (i.e. fabrication/assembly drawings of applicable civil structures, outline/arrangement drawings of equipment and its auxiliaries, wiring diagrams, etc.), and/or brochures. NPC shall review, comment or note corrections to be made and return two (2) copies to the Contractor within twenty (20) calendar days from receipt of the drawings and other required documents at appropriate NPC office mandated to act on those submittals. If corrections are required, the Contractor shall make all necessary corrections and re-submit the corrected ones within fourteen (14) calendar days for NPC's review and approval.

Drawings and/or brochures for approval shall be addressed to:

The Manager, Design and Development Department
National Power Corporation
BIR Road corner Quezon Avenue,
Diliman, Quezon City 1100

Approvals by NPC shall in no way relieve the Contractor from entire responsibility for the engineering, design, workmanship, material and all other liabilities under the Contract.

NPC reserves the right to reproduce any drawings or prints received from the Contractor as may be necessary regardless of any notice or marks appearing on the drawings or the prints prohibiting such action. All drawings shall preferably be in computer-aided design (CAD) format. All other computer-generated documents shall be compatible to Microsoft Office.

Prior to its submission, the Contractor shall first submit a list of drawings he proposes to submit for NPC's approval. Only selected drawings in the list, or any drawings as NPC deemed necessary, shall be submitted for approval. The sequence of submission shall be such that information is available for checking each drawing when it is received.

Construction of any particular structure or portion thereof prior to the approval of pertinent drawings shall be at the Contractor's risk; whom shall be responsible for the undue cost arising from subsequent correction to the work already done but needs to be rectified to conform to the revised and approved drawings.

Should an error be found in the approved Contractor's drawings during construction/erection, the correction, including any field change considered necessary, shall be noted on the drawings and re-submitted for approval.

All data and information to be submitted shall be in the English language and all drawings shall be drawn using the metric system as unit of measurement.

All approved drawings shall form part of the Contract.

All drawings submitted by the Contractor or by any Sub-Contractor shall contain (in the lower right-hand corner), in addition to the Contractor's name, the date, drawing scale, drawing title and number, and contract number as given in the Specification.

NPC Standard Specifications for Title Blocks shall be provided to the Contractor during the contract implementation.

GW-4.2.2 As-Built Drawings

The Contractor shall provide and keep up-to-date "As-Built" drawings of all structures constructed. These drawings shall show all changes or revisions from the original drawings, including locations of embedded piping and other concealed items of Works.

The Contractor shall furnish prints of these drawings, which shall be kept in the Contractor's field office for use only as a record set. At the end of every month, all entries, changes or revisions made in the drawings by the Contractor shall be checked and approved by NPC.

The complete, duly checked and approved "As-Built" drawings shall be submitted by the Contractor within thirty (30) calendar days from the completion of the contract or prior to the issuance of the certificate of completion, on four (4) prints and one (1) set of write-once recordable CD's. Such CD's shall be suitable for CD ROM/WRITE drive of computer system.

Drawings and schedules shall be preferably submitted in standard A3 size. No separate payment will be made for furnishing of "As Built" drawings. Cost thereof shall be included in the various pay items in the Bill of Quantities.

GW-4.2.3 Processing of Drawings

All drawings to be submitted by the Contractor for NPC's review and approval shall be on A3 size folded to A4 unless mutually agreed otherwise during the implementation stage.

NPC shall review, comment or note corrections to be made and return two (2) copies to the Contractor within twenty (20) calendar days after receipt of the drawings/documents by NPC official(s) authorized to process such documents. If corrections are required, the Contractor shall make all the necessary corrections and re-submit the same within fourteen (14) calendar days for NPC's review and approval.

Five (5) prints with dark lines on a white background shall be furnished to NPC for each drawing submitted for approval. Two (2) copies will be returned to the Contractor either marked "Approved", "Approved with Corrections Indicated (AWCI)", or "Returned for Corrections (RFC)" as defined in GW-2.5.7 (d) above. When prints of drawings are marked AWCI or RFC, the Contractor shall revise/finalize these drawings and re-submit the same in five (5) copies each for final approval. Every revision shall be shown by number, date and subject in a revision block.

If minor revisions are made after a drawing has been approved, the Contractor shall furnish two (2) additional prints, subsequent to each revision. No major revision affecting the design shall be made after a



drawing has been marked "Approved" without re-submitting new drawings thereof for re-processing and approval of such revision.

GW-4.2.4 Documents for NPC's Records

The Contractor shall furnish five (5) copies of Material Data, Material Certifications and Test Results/Reports required by governing Codes and Standards for NPC's records

GW-5.0 INSPECTION AND TESTS

GW-5.1 General

The Contractor shall perform at his own expense all tests required to ensure adequacy of material, workmanship and conformance of materials/equipment to the requirements of the specifications and standards.

The Contractor shall submit to NPC for approval, a complete test program for all his supplied materials/equipment and workmanship covered by the contract. Likewise, five (5) copies of test procedures shall be submitted for approval at least forty-five (45) days prior to the conduct of actual test.

NPC and/or his duly authorized representatives shall witness all applicable tests detailed in the relevant sections. NPC shall be notified by the Contractor thirty (30) days in advance of all test programs and schedule to be conducted requiring the presence of NPC.

NPC shall still be notified in advance of tests although not requiring the presence of NPC. In such case, the Contractor shall then proceed with the tests and shall submit test reports in five (5) copies to NPC. NPC's acceptance of the work by waiving the inspection of tests and receipt of the Contractor's Certified Test Reports and Inspection and Testing Certificate shall in no way relieve the Contractor of his responsibility in accordance with the requirement of the Specifications.

For inspected or tested goods that fail to conform with the Specification, the Contractor shall either replace or make any alterations necessary to meet the requirements of the Specifications at no costs to NPC.

The Contractor shall provide the required consumables, if any, to be used during the test, unless otherwise specified in the relevant sections of the technical specifications.

During the test and upon written request of the Contractor, NPC may provide personnel to assist the Contractor in the performance of the test under the direction of the Contractor.

NPC or its designated representative shall be entitled to attend the tests and/or inspections conducted on the premises of the Contractor provided that NPC shall bear all of its own costs and expenses incurred in connection with such attendance including, but not limited to, all traveling and board and lodging expenses. The Contractor, however, shall extend all reasonable facilities and assistance during the conduct of such test and/or inspection on its premises.



GW-5.2 Inspection/Tests at Contractor's Premises

NPC reserves the right to inspect all shop and assembly work associated with the Works, verify quantities consigned to stores and inspect quality control and assurance records as well as shop and purchase order records. When scheduled, and as often as NPC deems appropriate, progress will be monitored with respect to Key Dates in the Contract Schedule and the sequence of events and activities on the Contractor's Detailed Contract Schedule.

The Contractor shall carry out all tests in accordance with the requirements of the specifications and submitted test procedures duly approved by NPC.

Prior to shipment and final inspection, each material/equipment furnished by the Contractor shall be given the manufacturer's standard factory acceptance test and/or as required in the relevant sections of the technical specifications.

The Contractor shall carry out tests, as may be required by the specified Standards and the Quality Control and Assurance Program, as well as the entire test program approved by NPC.

If NPC opted not to witness the Factory Tests, NPC will issue a Certificate of Waiver of Tests Witnessing/Inspection for the equipment and materials. In such case, the Contractor shall proceed with the Factory Tests in accordance with the requirement of the specification and the manufacturer's test specification as approved by NPC.

Issuance of the Certificate of Waiver of Tests Witnessing/Inspection for equipment or material required to be witnessed by NPC or its authorized representative(s) however, shall in no way relieve the Contractor of his responsibility to conform with the approved test procedures and the requirements of the Specifications.

The factory test record and dispositions, and any other pertinent supporting data and documents shall form part of a test report to be submitted in accordance with the specification.

GW-5.3 Tests Failures

If any equipment or materials supplied by the Contractor fails to pass any test, the Contractor shall make the necessary corrections or alterations for defects or order equipment/component replacement, as maybe appropriate. Any and all expenses due to additional tests or re-tests made on that regard, i.e. failure to meet the acceptance criteria and other requirements of the specification, shall be borne by the Contractor.

GW-5.4 Test Reports/Certificates

Five (5) certified copies of the reports of all tests and other manufacturer standard tests shall be furnished to NPC within a maximum of fifteen (15) days following the completion of the tests.

Test certificates shall include, in addition to the test results, the following information:

- a) Name/Title of Project and Specs No.;

All records generated during the course of the Contract, including those generated as evidence of effective implementation of the quality assurance program of the Contractor, shall be retained by the Contractor for a minimum period of five (5) years from the date of contract completion. These records shall be made available to NPC on request during the retention period.

GW-6.4 Reporting and Corrective Action

The Contractor's quality assurance program shall provide established procedures for prompt detection and correction of all conditions adversely affecting quality, including failures, malfunctions, incidents, trends, deficiencies, deviations, non-conformances, and defective materials.

GW-7.0 CERTIFICATE OF COMPLETION AND ACCEPTANCE

When all the works and services have been satisfactorily completed as required in the Contract, the Contractor may give notice to this effect to NPC. Such notice shall be deemed to be the basis for NPC to conduct final joint inspection. Certificate of Completion shall be issued within fifteen (15) days after all works have been inspected and found in conformance to the specifications and contract requirements.

The Defects Liability Period of one (1) year for the completed Works shall commence on the date of issue of the Certificate of Completion. During this period, the Contractor shall undertake the repair works, at his own expense, of any damage to the infrastructure on account of the use of materials of inferior quality, within ninety (90) days from the time NPC has issued an order to undertake repair. In case of failure or refusal to comply with this mandate, NPC shall undertake such repair works and shall be entitled to full reimbursement of expenses incurred therein upon demand.

One (1) year after the issuance of Certificate of Completion, provided that there are no defects found and/or pending repair works, NPC shall issue the Certificate of Final Acceptance for the completed Works. Project warranty period shall start upon issuance of final acceptance.



SECTION VI

TECHNICAL SPECIFICATIONS CIVIL WORKS



SECTION VI - TECHNICAL SPECIFICATIONS**CW – CIVIL WORKS****TABLE OF CONTENTS**

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SECTION VI – TECHNICAL SPECIFICATIONS**CW – CIVIL WORKS****CW-1.0 GENERAL CONSTRUCTION FACILITIES****CW-1.1 Scope**

This section covers the construction and/or maintenance of access roads, drainage system and other appurtenant structures, moving-in of the Contractor's construction equipment, setting up of the Contractor's camp and the disposition of the Contractor's various facilities at the end of the Contract.

CW-1.2 Moving-in

The Contractor shall bring to the site all his necessary construction equipment and plant and install all stationary construction equipment and plant at location and in the manner approved by the NPC. The Contractor shall submit sufficient detailed plans showing the proposed location of such stationary equipment and plant and other pertinent data. No installation of such stationary equipment shall be undertaken unless the corresponding plans have been approved by the NPC.

CW-1.3 Contractor's Camp Facilities

The Contractor shall provide and grade his camp site, construct his camp, employee housing, warehouse, machine and repair shops, fuel storage tanks and provide such related facilities and sanitary conveniences that the Contractor deems necessary for maintaining health, peace and order in the camp and work areas. The areas that may be used by the Contractor within the plant site shall be designated by the NPC.

The Contractor shall provide, maintain and operate, under competent direction, such camps and facilities as are necessary for the housing, feeding and accommodation of his employees.

CW-1.4 Water Supply

The Contractor shall, at his own expense, be responsible for the supply, installation, operation and maintenance of a safe and adequate supply of drinking and domestic water. Whenever there is a possibility of contamination of the water supply for drinking and domestic purposes, chlorination or some other approved methods of sterilization shall be carried out. The installation and maintenance of these services shall be subject to the approval of the NPC.

CW-1.5 Sewerage Disposal and Sanitation

The Contractor shall, at his own expense, be responsible for the installation operation and maintenance of an adequate sewerage disposal and sanitation system and shall provide adequate toilet and wash-up facilities for his employees at his camp and in the areas where work is being carried out.



The Contractor shall execute the work with due regard to adequate sanitary provisions and applicable codes and shall take all necessary steps to prevent the pollution of water in any spring, river, or other sources of water supply. All toilets or wash-up facilities shall be subject to the prior and continuing approval of the NPC.

CW-1.6 Fire Protection

The Contractor shall observe all necessary precautions against fire, shall provide and maintain at his own expense, portable fire-fighting equipment he may deem necessary, and shall comply with all applicable laws of the Philippines relating thereto.

In the event of an uncontrollable fire occurring in the area of the Contractor's operation, the Contractor shall have to extinguish the fire immediately at his own expense, to the full extent of the manpower and equipment employed under the contract at the time of the fire.

The Contractor shall indemnify NPC against all liabilities, claims, damages and/or lawsuits arising thereto.

CW-1.7 Construction Power

The Contractor shall be responsible for providing his own electric power supply required for construction and erection/installation. If power is available from NPC and should the Contractor elect to utilize the NPC's power supply, he shall make an arrangement with NPC concerned group as to the billing rates and other requirements needed for direct connection to NPC.

CW-1.8 Camp Security

The Contractor shall provide his own security force to the extent that he deems necessary for maintaining peace and order in the camp and work areas and to safeguard materials and equipment. Nothing under the provisions of this paragraph shall relieve the Contractor from full responsibility for the maintenance of peace and order and protection of life and property in all areas where he operates.

CW-1.9 Construction Material Storage

The Contractor is required to put up warehouse(s) with capacities sufficient to store the construction materials required in the work. The warehouse(s) shall be specifically for this contract, notwithstanding his other facilities in the site that may serve the purpose.

CW-1.10 Removal of Camp and Construction Facilities

After the completion of the work covered by the contract and prior to acceptance of the completed work, the entire camp facilities of the Contractor, including its water supply system, electric distribution system, quarters, warehouses, shops, dining halls, commissaries, temporary shed and other facilities therein shall be removed by the Contractor. The site shall be cleared and cleaned as directed by the NPC.



CW-1.11 Measurement and Payment

No separate measurement and payment will be made for the Contractor's Construction Facilities. The entire cost thereof shall be included in the various pay items in the Bill of Quantities.

CW-2.0 CARE OF WATER DURING CONSTRUCTION**CW-2.1 Scope**

In accordance with the specifications contained in this section or otherwise directed, the Contractor shall construct and maintain all necessary temporary drainage ditches and other temporary protective works and he shall also furnish, install, maintain and operate necessary pumping equipment and other devices to protect construction operations free from water coming from any source, including rain.

CW-2.2 Drainage and Dewatering

The Contractor shall be responsible for dewatering foundation areas so that work can be carried out on a suitably dry condition. The Contractor shall construct drainage ditches, holes, culverts, furnish, maintain and operate at his own expense all necessary pumps and other dewatering devices to keep all work areas free from water.

After the work is completed and before it is accepted by the NPC, the Contractor shall remove all pumping equipment and shall remove, fill or plug all temporary drainage structures as directed, all at his expense.

CW-2.3 Measurement and Payment

No separate measurement and payment will be made for the Care of Water During Construction operations. The cost of furnishing, constructing, maintaining, operating and removing of temporary drainage structures, pumping system and other dewatering devices necessary to keep construction operations free from water, shall be included in the various pay items in the Bill of Quantities for structures where such care of water is required.

CW-3.0 ENVIRONMENTAL REQUIREMENTS FOR CIVIL WORKS**CW-3.1 Scope**

This section pertains to the environmental and safety provisions, requirements and conditions that shall govern during the execution of all civil works under this project.

CW-3.2 General Conditions

The Contractor shall ensure compliance with the applicable environmental and safety regulations, as well as ECC conditions, during installation/construction of this project through the implementation of measures that include, but not limited to, the following:



- a) Designate a Safety Officer and a Pollution Control Officer who shall respectively handle all safety and environmental concerns of the project.
- b) Prepare and submit Construction Safety and Health Plan (CSHP).
- c) Properly manage debris and various waste generated during installation/construction, such as the following:
 - Dispose of demolition and construction debris in a designated or NPC approved disposal area(s);
 - Stockpile (and cover if possible) or haul to the designated and/or pre-developed dump sites (spoil disposal areas) that shall be provided with suitable drainage – equipped with sediment traps, stripped top soil, spoils from quarry/borrow sites and excavated materials;
 - Segregate solid wastes, such as empty cement sacks, scraps of tin or wood, used wires and other domestic garbage, for recycling or storage in NPC-approved temporary storage areas and further disposal to LGU-designated disposal sites.
 - Properly handle, store and dispose off, through DENR-accredited transporter/treater, hazardous wastes i.e. used oils, paints, thinner, etc.
- d) Limit construction activities that generate excessive noise to daytime works only to prevent nuisance to nearby residents during rest hours.
- e) As far as practicable, undertake site stripping, grading and excavations during dry weather.
- f) Construction/Installation shall be carried-out in a manner where landslides and erosions are minimized.
- g) Avoid unnecessary opening/clearing of areas outside construction sites or destruction of vegetative cover, especially cutting of existing trees; and to re-vegetate disturbed areas.
- h) Implement biological control measures such as maintenance of vegetation buffers (i.e. sodding of grass, planting of creeping vines, herbs, shrubs and trees) to shield streams/rivers from sedimentation; planting of vegetative cover over erodible surfaces; and planting of exposed sloping areas with shallow-rooted species like grasses, herbs or creepers.
- i) Locate fill slopes and spoil heaps away from drainage routes and properly remove/dispose the same as soon as practicable.
- j) Preserve or replace, if practicable, natural drainage patterns (when disturbed by civil works) with appropriate drainage channels.



- k) Convey oil-contaminated wastewater from workshops, garages, or gas filling stations through an oil trap (i.e. improvised oil-water separator) prior to discharge.
- l) Spray water, wherever and whenever necessary, to minimize dust generation.
- m) Provide PPEs and other safety provisions required by DOLE, for its project/site works.
- n) Take all necessary steps to prevent the pollution of groundwater and/or water bodies in the vicinity of the project site.

CW-3.3 Measurement and Payment

No separate measurement and payment will be made for the Contractor's compliance to the foregoing. The entire cost thereof shall be included in the various pay items in the Bill of Quantities.

CW-4.0 SITE GRADING**CW-4.1 Scope**

In accordance with the specifications contained herein and in conformance with the lines, slopes, grades and extent shown on the plans or otherwise directed by the NPC, the Contractor shall furnish all equipment, labor and materials and shall perform the required grading work.

CW-4.2 Clearing and Grubbing

The Contractor shall perform clearing and grubbing on the project site. The site shall be cleared and grubbed of all trees and brush except particular trees, which may be retained by the NPC for preservation. Particular trees to be left in place shall be protected from scarring and/or other injuries during clearing and grubbing work and other construction operations.

All stumps, roots and brush shall be removed to a depth of thirty (30) cm below original ground surface and disposed of in a place designated by the NPC. Downed timber, which may be ordered saved by the NPC for future use, shall be cut into logs as directed and neatly piled in a place designated by the NPC, otherwise they shall be disposed of same as above.

CW-4.3 Unsuitable Excavation

Areas required to be brought to grade shall be excavated or filled as the case may be. Grading work shall be carried out in such a manner that the free drainage is maintained at all times and nowhere shall pondage be found in any part of the work.

The NPC may require the modification of slopes and grades according to the conditions actually encountered during excavation, but such change or modification shall not be construed to mean by the Contractor as a



basis for additional compensation over and above the contract unit prices.

Any over-excavation performed by the Contractor for any purpose or reason, except as may be ordered by the NPC, shall be at the Contractor's expense and any excess of excavation shall be refilled, where required, with approved materials that shall be furnished, placed and properly compacted at the expense of the Contractor.

Unsuitable materials, as determined by the NPC, which may be encountered below established grade, shall be removed to a depth as directed and accordingly replaced with suitable materials approved by the NPC. The removal and proper disposal of such unsuitable materials shall be paid for at the contract unit price for the item, Grading Excavation, and payment for placing and compacting suitable material be made at the contract unit price for the item, Grading Fill, in the Bill of Quantities.

Fill work shall not be started until the area has been inspected and approved by the NPC after stripping. Grading fill shall be spread and compacted in layers of 15 cm. loose volume and compacted with approved roller weighing not less than 10 tons. Each layer shall be moistened or dried as directed for maximum compaction. No succeeding layer shall be placed thereon unless the preceding layer has been tested for compaction and approved by the NPC.

In the event that construction of concrete footing or other concrete foundations is on fill, the fill shall be compacted efficiently and thoroughly so that when the fill is tested for compaction at the required foundation elevation for the structure, the required bearing capacity is attained but in no case less than 17.24MPa. In no case shall filling and compaction work to be done without the presence of NPC's inspectors. The Contractor shall be held liable for any structural instability or damage that might result in consequence to non-compliance of this requirement. The Contractor shall institute corrective measures to bring the foundation base to a condition or state that will conform to the required bearing capacity; and also to repair and make good any damage on the structure to the satisfaction and at no cost to NPC.

CW-4.4 Measurement and Payment

CW-4.4.1 Clearing and Grubbing

Unless otherwise specified in the bill of quantities, no separate measurement and payment will be made for Clearing and Grubbing. Corresponding cost hereof shall be included in the unit bid price of relevant item(s) in the bill of quantities.

CW-4.4.2 Unsuitable Excavation

Measurement for payment for Unsuitable Excavation shall be based on the number of cubic meters excavated and properly disposed. Volume shall be computed by the average end area method which shall be the volume between the original ground (as determined by survey to be made by representatives of both NPC and the Contractor) and graded surface on the drawings or as established by NPC. To this volume shall



be added, for purpose of payment, all authorized excavations below grade.

Payment will be made at the contract unit price for the item Unsuitable Excavation in the Bill of Quantities, which payment shall constitute full compensation for furnishing of all labor, construction equipment and incidentals necessary excavate, dispose and other related work required to complete the work item.

CW-5.0 SAND AND GRAVEL FILL

CW-5.1 Scope

In accordance with the specifications contained herein and as shown on the drawings and otherwise directed, the Contractor shall perform the required filling works for the entire project, including the proper disposal of excess excavated materials.

CW-5.2 Materials

The material shall be of the same classification as the sand and gravel base consisting of river sand and gravel as approved by the NPC. The composite material shall be free from vegetable matter and lumps or balls of clay, and shall be uniformly graded from coarse to fine in accordance with the grading requirements shown below:

<u>Sieve Designation</u> <u>(Square Mesh Sieves)</u>	<u>Percentage by</u> <u>Weight Passing</u>
50.0 mm (2")	100
25.4 mm (1")	55-85
9.5 mm (3/8")	35-60
4.76 mm (No. 4)	25-50
2.08 mm (No. 10)	20-40
0.42 mm (No. 40)	8-20
0.074 mm (No. 200)	2-8

CW-5.3 Construction

No fill materials shall be placed in unless inspected and approved by the NPC. Fill materials shall be placed and spread in layer covering the entire length and breadth of the section under construction, each layer not to exceed 15 cm. in loose volume thickness and compacted thoroughly to the desired compaction as determined by the NPC. No succeeding layer shall be placed until the previous layer has been tested and approved, as to compaction, by the NPC.

CW-5.4 Measurement and Payment

Measurement for payment for Sand and Gravel Fill will be based on the number of cubic meters of fill materials placed within the neat lines as shown on the drawings.

Payment will be made at the contract unit price for the item, Sand and Gravel Fill/Base, in the Bill of Quantities, which payment shall constitute full compensation for furnishing, placing and compacting fill materials;



labor which include spreading, compacting, etc., equipment and other incidentals necessary to complete the item.

CW-6.0 FORMWORK**CW-6.1 Scope**

This work covers the supply, construction, erection and removal of formwork. Formwork shall be of sufficient strength with all necessary bracing, fasteners, etc. and in conformity with the specified requirements of applicable building code requirements for concrete formwork, and National Structural Code of the Philippines.

CW-6.2 Material Requirement

Timber, lumber and plywood to be used for falsework and formwork shall be sound and shall comply with the requirements of these specifications. Use forms where a smooth form finish is required. Lumber shall be square-edged or tongue-and-groove boards, free of raised grain, knotholes and the other surface defects. Steel when used shall conform to the requirements of the ASTM A36. Steel form surfaces shall not contain irregularities, dents, or sags.

Forms shall be wood, plywood, or steel. Wood forms for surfaces exposed to view in the finished structure and requiring a smooth form finish, shall be plywood. For unexposed surfaces, undressed square-edge lumber may be used. Forms for surfaces requiring special finishes shall be plywood, or shall be lined with plywood, a non-absorptive, hard-pressed fiberboard, absorptive-type lining or other suitable material. Plywood, other than for lining, shall be concrete-form plywood free of raised grain, torn surfaces, worn edges, patches, or other surface defects, which would impair the texture of the concrete surface. Surfaces of steel forms shall be free from irregularities, dents, and sags.

CW-6.3 Construction Requirements**CW-6.3.1 Formwork Construction**

Forms shall be mortar and watertight, true to the dimensions, lines and grades of the structure and with the sufficient strength, rigidity, shape and surface smoothness as to leave the finished works true to the dimensions shown on the drawings or required by NPC and with the surface finish as specified.

The inside surfaces of forms shall be cleaned of all dirt, mortar and foreign material. Forms, which will subsequently be removed, shall be thoroughly coated with a release agent or coating prior to its use. The release agent shall be commercial quality form oil or other approved coating which will permit the ready release of the forms and will not discolor the concrete.

Formwork for concrete placed underwater shall be watertight.

Forms shall be constructed so that the form surface of the concrete does not undulate excessively in any direction. Undulations exceeding either 2 mm or 1/270 of the center distance between studs, joints, form stiffeners,



form fasteners, or walls will be considered to be excessive. Should any form of the forming system, even though previously approved for the use, produce a concrete surface with excessive undulations, its use shall be discontinued until modifications, satisfactory to NPC's Representative, have been made. Portions of concrete structures with surface undulations in excess of the limits herein stated may be rejected by the NPC.

Form fasteners consisting of forms bolts, clamps or other devices shall be used as necessary to prevent spreading of the forms during concrete placement. The use of ties consisting of twisted wire loops to hold the forms in position will not be permitted.

All formworks shall be provided with adequate clean-out openings to permit inspection and easy cleaning after all reinforcement has been placed. Where forms for continuous surfaces are placed in successive units, the forms shall be fitted over the completed surface to obtain accurate alignment of the surface and to prevent leakage of mortar. Panel forms shall be constructed so that they can be removed without damaging the concrete. All exposed joints, edges, and external corners shall be chamfered a minimum of 20 mm unless specified otherwise herein. Forms for heavy girders and similar members shall be constructed with a proper camber.

- Coating: Before placing the concrete, the contact surface of forms shall be coated with a non-staining mineral oil or suitable non-staining form coating compound or shall be given two coats of nitrocellulose lacquer, except as specified otherwise. Mineral oil shall not be used on forms for surfaces, which are to be painted. For surfaces not exposed to view in the finished structure, sheathing may be wetted thoroughly with clean water. All excess coating shall be removed by wiping with cloths. Reused forms shall have the contact surfaces cleaned thoroughly. Those that have been coated shall be given an additional application of the coating. Plaster waste molds shall be layered with two coats of the thin shellac or lacquer and coated with soft or thinned non-staining grease.
- Tolerance and Variations: The Contractor shall set and maintain concrete forms to ensure that, after removal of the forms and prior to patching and finishing, no portion of the concrete work will exceed any of the tolerances specified. Variations in floor levels shall be measured before removal of supporting shores. The Contractor shall make the necessary corrective measures for the variations resulting from deflection, or when the latter affects concrete quality or curing. The tolerances specified shall not exceed by any portion of the concrete surfaces; the specified variation for one element of the structure shall be considered unacceptable when it permits another element of the structure to exceed its allowable variations. Except as otherwise specified herein, tolerances shall conform to ACI 347.

CW-6.3.2 Removal of Formwork

Formwork shall not be removed without the permission of NPC; where such permission, however, shall not relieve the Contractor of its responsibility for the safety of the work. Blocks and bracing shall be removed at the time the forms are removed and in no case shall any portion of the wood forms be left in the concrete.



Falsework removal for continuous structures shall be as directed by NPC but in which case shall be temporarily supported such that the structure is gradually subjected to its working stresses. False work shall not be released in any span until the strength specified hereunder is attained.

When concrete strength tests are to be used as basis for the removal of forms and supports, the compressive strength of concrete must meet the following minimum requirements:

	Min. Time	Min.% Strength
Centering under girders and beams	14 days	80%
Sides of beams and all vertical surfaces	1 day	70%
Floor Slabs	14 days	80%

The site shall be cleared of all debris and refuse resulting from work.

CW-6.4 Measurement and Payment

No separate measurement for payment will be made for this item. The entire cost thereof shall be included in the relevant pay items in the Bill of Quantities.

CW-7.0 CONCRETE

CW-7.1 Scope

In accordance with the specifications contained in this section, the Contractor shall furnish all materials, labor, equipment and tools and perform all concreting works in accordance with the drawings, or as otherwise directed.

CW-7.2 Class of Concrete

Class of concrete or strength shall be as indicated on the drawings, which shall conform to the minimum requirement for compressive strength indicated on the provision of NSCP for Concrete and, in no case, shall not be less than 17.24 MPa.

CW-7.3 Materials

CW-7.3.1 Cement

Cement for concrete works shall be furnished by the Contractor and shall conform to the requirements of the latest edition of the Standard Specifications for Portland Cement (ASTM C150).

Unless otherwise specified, cement shall be ordinary Portland Cement, Type I for general construction which concrete is not in contact with soils or ground water and Type II for concrete in contact with soil or ground water.

Changing of brand or type of cement within the same structure will not be permitted unless with prior permission and approval obtained from the NPC.



CW-7.3.2 Reinforcing Steel

The Contractor shall furnish all reinforcing steel of the sizes shown on the drawings and in accordance with the herein specifications for reinforcing steel.

CW-7.3.3 Water

Water for use in concrete shall be subject to the approval of the NPC. It shall not be salty and shall be reasonably clear and free from oil, acid, injurious alkali or vegetable matter.

CW-7.3.4 Aggregates

All coarse and fine aggregates shall consist of hard, tough, durable and clean, uncoated particles. All foreign materials and dust shall be removed by processing. Aggregates shall generally be rounded and reasonably free from thin, flat and elongated particles in all sizes and well graded from coarse to fine.

CW-7.4 Storage of Materials**CW-7.4.1 Cement and Aggregates**

All cement shall be stored, immediately upon delivery at the Site, in weatherproof building that will protect the cement from dampness. The floor shall be adequately raised from the ground and in buildings placed in the locations approved by NPC. Provisions for storage shall be ample, and the shipments of cement as received shall be separately stored in such a manner that allows the earliest deliveries to be used first and to provide easy access for identification and inspection of each shipment. Storage buildings shall have capacity for storage of sufficient quantity of cement to allow sampling at least twelve (12) days before the cement is to be used. Bulk cement, if used, shall be transferred to elevated air tight and weatherproof bins. Stored cement shall meet the test requirements at any time after storage when NPC orders retest. At the time of use, all cement shall be free flowing and free of lumps.

Handling and storing of concrete aggregates shall be such that segregation or inclusion of foreign materials is sufficiently prevented. NPC may require that aggregates be stored on separate platforms at satisfactory locations.

In order to secure greater uniformity of concrete mix, NPC may require that the coarse aggregate be separated into two or more sizes. Different sizes of aggregates shall be stored in separate bins or in separate stockpiles and relatively away from each other to prevent the material at the edges of the piles from intermixing.

CW-7.4.2 Reinforcing Steel

Reinforcing steel shall be stored in accordance with the herein specifications for reinforcing steel.



CW-7.5 Concreting**CW-7.5.1 General**

The written approval of the NPC shall be secured prior to any concreting work. All concrete shall be poured on dry and cleaned surfaces.

CW-7.5.2 Placing Reinforcement

Reinforcing steel and embedded items shall be properly and securely installed prior to the placing of concrete.

In no case shall concreting start without prior inspection and approval by the NPC of the placed reinforcement and other embedded items.

CW-7.5.3 Mixing Concrete

Mixing of concrete shall conform to the requirements of ACI Code for Concrete Construction.

CW-7.5.4 Placing Concrete

Concrete shall be conveyed from mixers to the forms or to the place of deposit as rapidly as possible and by methods that will prevent segregation or loss of ingredients. There shall be no vertical drop greater than 1.5 meters except where suitable equipment like metal pipe or tremie is used. The pipe or tremie shall be kept full of concrete and its end shall be kept buried in the newly placed concrete. Chutes through which concrete is delivered to the structure in a thin, continuously exposed flow will not be permitted except for very limited or isolated sections of the work.

Earth surfaces, upon which concrete shall be placed, shall be cleaned, dry and thoroughly compacted before placing the concrete.

Rock surface, upon which concrete shall be placed, shall be thoroughly cleaned of loose or semi-detached or unsound rock particles. Before placing concrete, all surfaces shall be wetted thoroughly to keep them in a completely moist condition, after which leveling mortar of the same cement ratio as the concrete mix complete contact between concrete and the leveled surface.

CW-7.5.5 Finishing Concrete

After the concrete has been deposited and distributed, the concrete shall be struck off and screened by mechanical means approved by the NPC. The finishing machine shall be of the screening and troweling type designed and operated both to strike off and to consolidate. Hand finishing may be employed when suitable finishing machines are not available. Finishing of concrete shall be done, as directed, to the satisfaction of the NPC.

All finished surfaces shall be tested with 3 meters straight edge and any variation of the surface from the desired crown or cross section shall be properly corrected.



CW-7.5.6 Removal of Forms

Forms shall be removed as soon as practicable in order to avoid delay in curing and to make possible earliest practicable repair of surface imperfections, but in no case shall they be removed without approval. Any needed repair or treatment shall be performed at once and shall be followed immediately by the specified curing. Forms shall be removed with care so as to avoid injury to the concrete and any concrete so damaged shall be repaired as directed.

CW-7.5.7 Curing and Protection

Concrete shall be cured for a period of not less than fourteen (14) consecutive days by keeping the surfaces of concrete continuously (not periodically) wet. Where tongue and groove forms were used and left in place of curing, they shall be kept wet at all times prevent opening at the joints and drying out of the concrete.

CW-7.5.8 Sampling and Testing of Concrete

The Contractor shall furnish all materials, either separately or mixed, as required by NPC. Selection of materials and the making of test specimens shall be made under the supervision of NPC and delivered to NPC laboratory or any NPC-accredited testing agency at the Contractor's expense.

The expense of making and curing all concrete specimens including the materials comprising the concrete specimens shall be borne by the Contractor. The cost of shipping and testing the concrete shall likewise be at the expense of the Contractor.

No concreting work on the project will be permitted to be done until NPC signifies in writing that, following the performance of the necessary tests, he gives his approval to the use of all materials involve in making the concrete.

Test cylinders shall be prepared from the concrete samples and tested. At least one set of four (4) cylinder samples shall be made for each major structural member. Two (2) cylinders shall be tested at 28 days for specification compliance and one shall be tested at 7 and 14 days respectively for information. The acceptance test result shall be the average of the strength of the two cylinders tested at 28 days.

The compressive strength of the concrete shall be deemed acceptable if the averages of the three consecutive strength test results is equal to or exceeds the specified strength and no individual test falls below the specified strength by more than 3.50 MPa.

The compressive strength of the concrete shall be deemed acceptable if the averages of the three consecutive strength test results is equal to or exceeds the specified strength and no individual test falls below the specified strength by more than 3.50 MPa.

Concrete deemed to be not acceptable using the above criteria maybe rejected unless the Contractor can provide evidence, by means of core tests, that the quality of concrete represented by the failed test result is acceptable in place. Three (3) cores shall be taken in accordance with ASTM C42 and soaked for 24 hours prior to testing. Concrete in the area



represented by the cores will be deemed acceptable if the average strength of the cores is equal to at least 85% of and no single core is less than 75% of the specified strength.

CW-7.5.9 Tolerances and Repair for Concrete Construction

Concrete structures shall be constructed to the lines shown on the drawings or where so required to suit actual field requirements. Any structure that does not conform to such lines shall be repaired or removed and made anew by the Contractor at no additional cost to the Corporation.

Repairs shall be made at surface imperfections due to faulty placing of concrete and cuts on the structures due to the removal of excess concrete on the lines shown on the drawings. Such repairs shall be made immediately after early stripping of the forms, after the imperfections have been identified and the methods of repair appropriately established.

CW-7.6 Measurement and Payment

Measurement for payment for Concrete (except concrete which shall be measured for separate payment) will be based on the volume of concrete placed and accepted within the neat lines of the structure as shown on the drawings or in accordance with the manner of measurement set forth in the various sections of the Technical Provisions. No deduction will be made for rounded or beveled edges or space occupied by the metal items 10 sq. cm. or less in cross section, embedded in concrete.

Payment will be made at the corresponding contract unit price for the various items of concrete shown in the Bill of Quantities. Payment shall cover all costs for furnishing all labor, materials, including equipment and tools required for concreting work. Payment shall also include non-shrink cementitious grout and epoxy grout inside foundation block out and above engine base plate and care of water.

CW-8.0 REINFORCING STEEL

CW-8.1 Description

This work shall consist of furnishing, fabricating, and placing of steel reinforcement of the type, size, shape and grade required in accordance with these specifications and in conformity with the requirements shown on the Drawings or as directed by the NPC.

CW-8.2 Material Requirement

All material shall conform to the requirements hereinafter given. Certified test reports (mill test or other) shall be submitted to the NPC for all reinforcement steel used. These tests shall show the results of all chemical and physical tests made.

CW-8.2.1 Bar Reinforcement

Reinforcement bars for concrete shall be hot-rolled, deformed billet-steel bars conforming to the requirements specified in ASTM A615 and PNS



49 unless shown on the Drawings or as required by the NPC. The use of the cold twisted bars is not permitted. Bar reinforcement shall be shipped in standard bundles, tagged and marked in accordance with the Code of Standard Practice of the Concrete Reinforcement Steel Institute.

CW-8.2.2 Sampling

The NPC's Representative will sample reinforcement bars at the source of supply or at the point of distribution, and the Contractor shall notify the NPC in sufficient time in advance to permit sampling and testing before shipment is made. Three (3) samples from each size shall be taken at random representing five (5) tons or fraction thereof of each size.

CW-8.3 Construction Requirement

CW-8.3.2 Fabrication

Bent bar reinforcement shall be cold bent as shown on the drawings or as required by the NPC. Bars shall be bent around circular pin having the following diameters (D) in relation to the diameter of the bar (d):

Bars 6mm Φ to 20mm Φ inclusive	D=6d
Bars 25mm Φ and 28mm Φ	D=8d
Bars 32mm Φ and greater	D=10d

Bends and hooks in stirrups and lateral ties may be bent to the diameter of the principal bar enclosed therein.

CW-8.3.3 Protection of Material

Steel reinforcement shall be protected at all times from injury. When placed in the work, it shall be free from dirt, detrimental scale, paint, oil or other foreign matter. However, when steel has on its surface easily removable and detrimental rust, loose scale or dust, it shall be cleaned by a satisfactory method, approved by the NPC.

Store reinforcement of the different sizes in racks raised above the ground with accurate identification. Protect reinforcing steel from contaminants such as grease, oil and dirt.

CW-8.3.4 Placing and Fastening Reinforcement & Miscellaneous Material (ACI-301)

All reinforcement bars, stirrups, hanger bars, wire fabric, spirals and other reinforcing materials shall be provided as indicated in the drawing or required by the specification, together with all necessary wire ties, chairs, screws, supports, and other devices necessary to install and secure the reinforcement properly. All reinforcement, when placed, shall be free from rust, scale, oil, grease, clay, and other coatings, and foreign substances that would reduce or destroy the bond. Rusting of reinforcement shall not reduce the effective cross sectional area of the reinforcement to the extent that the strength is reduced beyond specified values. Heavy, thick rust or loose, flaky rust shall be removed by rubbing with burlap or other approved method, prior to placing. Reinforcement that has bends not shown on the project drawings or on approved shop drawings, or is reduced in section by rusting such that its weight is not within permissible ASTM tolerances, shall not be used. All reinforcement shall be supported



and wired together to prevent displacement by construction loads or by the placing of concrete. Unless directed otherwise by the NPC, reinforcement shall not be bent after being partially embedded in hardened concrete. Detailing of reinforcing shall conform to ACI 315. Where cover over reinforcing steel is not specified or indicated, it shall be in accordance with ACI 318.

All steel reinforcement shall be accurately placed in position shown on the drawings or as required by the NPC and firmly held there during the placing and setting of the concrete. Bars shall be tied at all intersections except where spacing is less than 30 mm in each direction, when alternate intersections shall be tied. Ties shall fasten on the inside.

Distance from the forms shall be maintained by means of stays, blocks, hangers or other approved supports. Blocks for holding reinforcement from contact with the forms shall be pre-cast mortar blocks of approved shape and dimensions or approved chairs. Layers of bars shall, be separated by pre-cast mortar blocks or by other equally suitable devices. The use of pebbles, pieces of broken stone or brick, metal pipe and wooden blocks or metal chairs shall not be permitted. Unless otherwise shown on the Drawings or required by the NPC, the minimum distance between bars shall be 40mm. Reinforcement in any member shall be placed and then inspected and approved by the NPC before the placing of concrete commences. Bundled bars shall be tied together at not more than 1.80 meters intervals.

Reinforcement shall be placed accurately and secured. It shall be supported by suitable chairs and spaces or by metal hangers. On the ground, and where otherwise subject to corrosion, concrete or other suitable non-corrodible material shall be used for supporting reinforcement. Where the concrete surface will be exposed to the weather in the finished structure or where rust would impair the appearance or finish of the structure, all reinforcement supports, within specified concrete cover, shall be galvanized or made of a suitable non-corrodible material.

All placement or movement of reinforcing steel after placement, to positions other than indicated or specified, shall be subject to the approval of the NPC.

Concrete protection for reinforcement shall be as indicated, or if not indicated, in accordance with ACI 318.

The minimum concrete cover for reinforcement specified in the bid documents shall takes precedence over all permissible reinforcement placement variations; nothing in the variations listed below is to be constructed as permitting violation or compromise thereof:

- | | |
|--|-----------------|
| a. Height of bottom bars | ±6mm above form |
| b. Lengthwise positioning | ±50mm of bars |
| c. Spacing bars in walls and solid slabs | ±25mm |
| d. Spacing bars in beams and footings | ±6mm |
| e. Height of top bars | ±6mm |
| f. Stirrup spacing: | |
| (1) For any one stirrup | ±25mm |



(2) For over-all group

±25mm of stirrup

CW-8.3.5 Splicing

Splicing of reinforcement shall be in accordance with ACI 318, except as indicated otherwise or modified herein. Where splices in addition to those indicated on the drawings are necessary, they shall be approved by the NPC prior to their use. Splices shall not be made in beams, girders, and slabs at points of maximum stress. Butt Splicing shall preferably be used over lapping for bar sizes larger than 32 mm Φ . Splices to be welded shall conform to AWS D1.4; certification of weld ability of the reinforcement by the manufacturer, shall be submitted to the NPC. If the Contractor elects to use butt splicing of reinforcing, he shall submit complete details of the process to be used by the NPC. If the butt splices are used the Contractor shall ensure that the splice meets the requirements specified herein by performing at least three splices which shall be submitted for tests to a testing laboratory that has been approved for such testing by the NPC. The cost of these shall be borne by the Contractor.

All reinforcement shall be furnished in the full lengths indicated on the Drawings. Splicing of bars, except where shown on the Drawings will not be permitted without the written approval of the NPC. When allowed, splices shall be staggered as far as possible and with a minimum separation of not less than 40 bar diameters. Not more than one-third of the bars may be spliced in the same cross section, except where shown on the Drawings.

Unless otherwise shown on the Drawings, bars shall be lapped a minimum distance of:

<u>Splice Type</u>	<u>Grade 40 Min. Lap</u>	<u>But Not Less Than</u>
Tension	24d	300mm
Compression	20d	300mm

Where d is the diameter of the bar. In lapped splices, the bars shall be placed in contact and wired together. Lapped splices will not be permitted at locations where the concrete section is insufficient to provide a minimum clear distance of one and one-third the maximum size of coarse aggregate between the splice and the nearest adjacent bar. Welding of reinforcing steel shall only be done if detailed on the Drawings or if authorized by the NPC in writing. Spiral reinforcement shall be spliced by lapping at least one and half (1 1/2) turns or by butt-welding unless otherwise shown on the drawings.

CW-8.4 Measurement and Payment

The quantity to be paid for shall be the calculated theoretical number of kilograms of reinforcement steel bars as determined from the net length of the steel shown on the drawings, incorporated in the concrete and accepted.



The weight of deformed bars will be computed from the theoretical weight of the same nominal size as shown in the following tabulation:

<u>Designation</u>	<u>Size (mm)</u>	<u>Weight (kg/m)</u>
#2	6	0.222
#3	10	0.616
#4	12	0.888
#5	16	1.579
#6	20	2.468
#8	25	3.854
#9	28	4.833
#10	32	6.313
#11	36	7.991

Clips, ties, separators and other and related materials used for positioning and fastening the reinforcement in place as required by the NPC shall not be included in the weight-calculated payment under this item. If bars are substituted upon the Contractor's request and as a result, more steel is used than specified – only the amount specified shall be included.

When laps are made for splices, other than those shown on the drawings or required by the NPC and for the convenience of the Contractor, the extra steel shall not be measured nor paid for.

The accepted quantity shall be paid at the corresponding unit price for the item, Reinforcing Steel as shown in the Bill of Quantities which price and payment shall be made in full compensation for furnishing materials, labor, equipment and incidentals necessary to complete this item.



SECTION VII

BILL OF QUANTITIES



SECTION VII - BILL OF QUANTITIES

BILL OF QUANTITIES
CONCRETING OF PATHWALK FROM FOREBAY TO DAM AT BALONGBONG HEPP
CIVIL WORKS

Item No.	Description of Work or Materials	Work to Be Done	Reference	Unit	Estimated Quantity	Unit Price in Pesos (Words and Figures)	Total Amount (In Figures)
CW-1.0 CONCRETE PATHWALK							
CW-1.1	Unsuitable Excavation	excavate & dispose	Refer to NPC TS CW-4.3 & Drawing	cu.m.	825.00	_____(P_____)	_____(P_____)
CW-1.2	Sand and Gravel Fill (100mm THK Bedding)	furnish, place, spread & compact	Refer to NPC TS CW-5.0 & Drawing	cu.m.	300.00	_____(P_____)	_____(P_____)
CW-1.3	Concrete (17.24 Mpa) - 1500 mm wide x 150mm THK	furnish & construct	Refer to NPC TS CW-7.0 & Drawing	cu.m.	450.00	_____(P_____)	_____(P_____)
CW-1.4	Reinforcing Steel Bar (Grade 275)	furnish, cut, bend schedule & install	Refer to NPC TS CW-8.0 & Drawing	kgs.	9743.00	_____(P_____)	_____(P_____)
TOTAL AMOUNT OF CIVIL WORKS						_____(P_____)	_____(P_____)

Name of Firm

NATIONAL POWER CORPORATION

Name and Signature of Authorized Representative



Designation

VII-BOQ(CW)-1

SECTION VIII

BIDDING FORMS



SECTION VIII – BIDDING FORMS

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Standard Form No: NPCSF-INFR-01

Checklist of Technical & Financial Envelope Requirements for Bidders**A. THE 1ST ENVELOPE (TECHNICAL COMPONENT) SHALL CONTAIN THE FOLLOWING:****1. ELIGIBILITY DOCUMENTS****a. (CLASS A)****➤ Any of the following:**

- PhilGEPS Certificate of Registration and Membership under Platinum Category in accordance with Section 8.5.2 of the IRR;

OR:

- The following updated and valid Class "A" eligibility documents enumerated under "Annex A" of the Platinum Membership:

- Registration Certificate from the Securities and Exchange Commission (SEC) for corporations, Department of Trade and Industry (DTI) for sole proprietorship, or Cooperative Development Authority (CDA) for cooperatives;

- Mayor's/Business permit issued by the city or municipality where the principal place of business of the prospective bidder is located, or the equivalent document for Exclusive Economic Zones or Areas.

In cases of recently expired Mayor's/Business permits, it shall be accepted together with the official receipt as proof that the bidder has applied for renewal within the period prescribed by the concerned local government unit, provided that the renewed permit shall be submitted as a post qualification requirement in accordance with Section 34.2 of the Revised IRR of RA 9184.

- The prospective bidder's audited financial statements, showing, among others, the prospective bidder's total and current assets and liabilities, stamped "received" by the BIR or its duly accredited and authorized institutions, for the preceding calendar year which should not be earlier than two (2) years from the date of bid submission.
- Tax clearance per Executive Order 398, Series of 2005, as finally reviewed and approved by the BIR;
- Valid Philippine Contractors Accreditation Board (PCAB) license and registration for the type and cost of the contract for this Project or Special PCAB License in case of Joint Ventures.

OR:

- A combination thereof.

➤ Statement of all its ongoing government and private contracts if any, whether similar or not similar in nature and complexity to the contract to be bid (NPCSF-INFR-02)

➤ The Statement of the bidder's Single Largest Completed Contract (SLCC) similar to the contract to be bid, and whose value, adjusted to current prices using the Philippine Statistics Authority (PSA) consumer price index, must be at least 50% of the ABC (NPCSF-INFR-03) complete with the following supporting documents:

- Contract
- Owner's Certificate of Final Acceptance issued by the project owner other than the contractor or a final rating of at least Satisfactory in the Constructors Performance Evaluation System (CPES). In case of contracts with the private sector, an equivalent document (Ex. Official Receipt or Sales Invoice) shall be submitted

This Checklist of Requirements shall be provided to prospective suppliers/contractors including all forms. Suppliers/contractors are encouraged to consult this checklist before submitting their proposals on the deadline for the submission and receipt of offers.

Standard Form No: NPCSF-INFR-01
Page 2 of 3

(The Single Largest Completed Contract (SLCC) as declared by the bidder shall be verified and validated to ascertain such completed contract. Hence, bidders must ensure access to sites of such projects/equipment to NPC representatives for verification and validation purposes during post-qualification process.

It shall be a ground for disqualification, if verification and validation cannot be conducted due to inaccessibility of the site for whatever reason or fault of the bidder.)

- Special PCAB License in case of Joint Ventures
- Duly signed computation of its Net Financial Contracting Capacity (NFCC) at least equal to the ABC (NPCSF-INFR-04);

b. (CLASS B)

- Valid Joint Venture Agreement, if applicable (NPCSF-INFR-05)

2. Technical Documents

- Bid Security, any one of the following:
 - Bid Securing Declaration (NPCSF-INFR-06c)
OR
 - Cash or Cashier's/Manager's check issued by a Universal or Commercial Bank – 2% of ABC;
OR
 - Bank draft/guarantee or irrevocable letter of credit issued by a Universal or Commercial Bank: (NPCSF-INFR-06a) - 2% of ABC;
OR
 - Surety Bond callable upon demand issued by a reputable surety or insurance company (NPCSF-INFR-06b) - 5% of ABC, with
 - Certification from the Insurance Commission as authorized company to issue surety
- Duly signed, completely filled-out and notarized Omnibus Sworn statement (Revised) (NPCSF-INFR-07), complete with the following attachments:
 - For Sole Proprietorship:
 - Special Power of Attorney
 - For Partnership/Corporation/Cooperative/Joint Venture:
 - Document showing proof of authorization (e.g., duly notarized Secretary's Certificate, Board/Partnership Resolution, or Special Power of Attorney, whichever is applicable)
- Organization Chart for the project (NPCSF-INFR-08)
- Duly Signed List of Contractor's Key Personnel (based on the minimum key personnel) with complete supporting documents (NPCSF-INFR-09, 10a, 10b & 11)
- Duly Signed List of Contractor's Equipment (owned, leased or under purchase agreement (NPCSF-INFR-12), with
 - Proof of ownership and/or certificate of availability issued by Equipment Lessors

Standard Form No: NPCSF-INFR-01
Page 3 of 3

- Complete eligibility documents of proposed sub-contractor, if applicable

B. THE 2ND ENVELOPE (FINANCIAL COMPONENT) SHALL CONTAIN THE FOLLOWING:

- Duly signed Bid Letter indicating the total bid amount in accordance with the prescribed form (NPCSF-INFR-13)
- Duly signed and completely filled-out Bill of Quantities (Section VII) indicating the unit and total prices per item and the total amount in the prescribed Bill of Quantities form.
- Duly Signed Detailed Estimates for each items of work showing the computations in arriving at each item's unit prices used in coming up with the bid (NPCSF-INFR-14)
- Summary sheets indicating the direct unit prices of construction materials, labor rates and equipment rental rates used in coming up with the bid (NPCSF-INFR-15)

CONDITIONS:

1. *Each Bidder shall submit one copy of the first and second components of its Bid. NPC may request additional hard copies and/or electronic copies of the Bid. However, failure of the Bidders to comply with the said request shall not be a ground for disqualification.*
2. *A Bidder not submitting bid for reason that his cost estimate is higher than the ABC, is required to submit his letter of non-participation/regret supported by corresponding detailed estimates. Failure to submit the two (2) documents shall be understood as acts that tend to defeat the purpose of public bidding without valid reason as stated under Section 69.1.(i) of the revised IRR of R.A. 9184.*

Standard Form Number: NPCSF-INFR-02

List of All Ongoing Government and Private Contracts Including Contract Awarded But Not Yet Started

Business Name : _____
Business Address : _____

Name of Contract/Location/ Project Cost	a. Owner's Name b. Address c. Telephone Nos.	Nature of Work	Contractor's Role		a. Date Awarded b. Date Started c. Date of Completion or Estimated Completion Time	Value of Outstanding Works
			Description	%		
<u>Government</u>						
<u>Private</u>						
					Total Cost	

The bidder shall declare in this form all his on-going government and private contracts including contracts where the bidder (either as individual or as a Joint Venture) is a partner in a Joint Venture agreement other than his current joint venture where he is a partner. Non declaration will be a ground for disqualification of bid.

Note : This statement shall be supported with the following documents for all the contract(s) stated above which shall be submitted during Post-qualification:

1. Contract/Purchase Order and/or Notice of Award
2. Certification coming from the project owner/client that the performance is satisfactory as of the bidding date.

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

Standard Form Number: NPCSF-INFR-03

The Statement of the bidder's Single Largest Completed Contract (SLCC) similar to the contract to be bid

Business Name : _____

Business Address : _____

Name of Contract	a. Owner's Name b. Address c. Telephone Nos.	Nature of Work	Contractor's Role		a.Amount at Award b.Amount at Completion c. Duration	a. Date Awarded b. Contract Effectivity c. Date Completed
			Description	%		

- Notes: 1. The bidder must state only one (1) Single Largest Completed Contract (SLCC) similar to the contract to be bid.
2. Supporting documents such as Contract/Purchase Order and any of the following: Owner's Certificate of Final Acceptance issued by the project owner other than the contractor; or A final rating of at least Satisfactory in the Constructors Performance Evaluation System (CPES); or Official Receipt (O.R); or Sales Invoice for the contract stated above shall be submitted during Bid Opening.

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

Standard Form Number: NPCSF-INFR-04

NET FINANCIAL CONTRACTING CAPACITY (NFCC)

- A. Summary of the Bidder's/Contractor's assets and liabilities on the basis of the income tax return and audited financial statement for the immediately preceding calendar year are:

		Year 20__
1.	Total Assets	
2.	Current Assets	
3.	Total Liabilities	
4.	Current Liabilities	
5.	Net Worth (1-3)	
6.	Net Working Capital (2-4)	

- B. The Net Financial Contracting Capacity (NFCC) based on the above data is computed as follows:

NFCC = [(Current assets minus current liabilities) x 15] minus the value of all outstanding or uncompleted portions of the projects under ongoing contracts, including awarded contracts yet to be started coinciding with the contract for this Project.

NFCC = P _____

Herewith attached is certified true copy of the audited financial statement, stamped "RECEIVED" by the BIR or BIR authorized collecting agent for the immediately preceding calendar year.

Submitted by:

Name of Bidder/Contractor

Signature of Authorized Representative

Date : _____

Standard Form Number: NPCSF-INFR-05

JOINT VENTURE AGREEMENT**KNOW ALL MEN BY THESE PRESENTS:**

That this JOINT VENTURE AGREEMENT is entered into by and between:
_____, of legal age, *(civil status)* _____, authorized representative of
_____ and a resident of _____.

- and -

_____, of legal age, *(civil status)* _____, authorized representative of
_____ a resident of _____.

That both parties agree to join together their capital, manpower, equipment, and other resources and efforts to enable the Joint Venture to participate in the Bidding and Undertaking of the hereunder stated Contract of the **National Power Corporation**.

NAME OF PROJECT**CONTRACT AMOUNT**

That the capital contribution of each member firm:

NAME OF FIRM	CAPITAL CONTRIBUTION
1. _____	P _____
2. _____	P _____

That both parties agree to be jointly and severally liable for their participation in the Bidding and Undertaking of the said contract.

That both parties agree that _____ and/or _____ shall be the Official Representative/s of the Joint Venture, and are granted full power and authority to do, execute and perform any and all acts necessary and/or to represent the Joint Venture in the Bidding and Undertaking of the said contract, as fully and effectively and the Joint Venture may do and if personally present with full power of substitution and revocation.

That this Joint Venture Agreement shall remain in effect only for the above stated Contract until terminated by both parties.

Name & Signature of Authorized Representative

Official Designation

Name of Firm

Name & Signature of Authorized Representative

Official Designation

Name of Firm

Witnesses

1. _____

2. _____

[Jurat]

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

Standard Form Number: NPCSF-INFR-06a

FORM OF BID SECURITY (BANK GUARANTEE)

WHEREAS, (Name of Bidder) (hereinafter called "the Bidder") has submitted his bid dated (Date) for the [name of project] (hereinafter called "the Bid").

KNOW ALL MEN by these presents that We (Name of Bank) of (Name of Country) having our registered office at _____ (hereinafter called "the Bank" are bound unto National Power Corporation (hereinafter called "the Entity") in the sum of [amount in words & figures as prescribed in the bidding documents] for which payment well and truly to be made to the said Entity the Bank binds himself, his successors and assigns by these presents.

SEALED with the Common Seal of the said Bank this _____ day of _____ 20____.

THE CONDITIONS of this obligation are that:

- 1) if the Bidder withdraws his Bid during the period of bid validity specified in the Bidding Documents; or
- 2) if the Bidder does not accept the correction of arithmetical errors of his bid price in accordance with the Instructions to Bidder; or
- 3) if the Bidder, having determined as the LCB, fails or refuses to submit the required tax clearance, latest income and business tax returns and PhilGEPs registration certificate within the prescribed period; or
- 4) if the Bidder having been notified of the acceptance of his bid and award of contract to him by the Entity during the period of bid validity:
 - a) fails or refuses to execute the Contract; or
 - b) fails or refuses to submit the required valid JVA, if applicable; or
 - c) fails or refuses to furnish the Performance Security in accordance with the Instructions to Bidders;

we undertake to pay to the Entity up to the above amount upon receipt of his first written demand, without the Entity having to substantiate its demand, provided that in his demand the Entity will note that the amount claimed by it is due to the occurrence of any one or combination of the four (4) conditions stated above.

The Guarantee will remain in force up to 120 days after the opening of bids or as it may be extended by the Entity, notice of which extension(s) to the Bank is hereby waived. Any demand in respect of this Guarantee should reach the Bank not later than the above date.

DATE _____ SIGNATURE OF THE BANK _____

WITNESS _____ SEAL _____

(Signature, Name and Address)

Standard Form Number: NPCSF-INFR-06b

FORM OF BID SECURITY (SURETY BOND)

BOND NO.: _____ DATE BOND EXECUTED: _____

By this bond, We (*Name of Bidder*) _____ (hereinafter called "the Principal") and (*Name of Surety*) _____ of (*Name of Country of Surety*) _____, authorized to transact business in the Philippines (hereinafter called "the Surety") are held and firmly bound unto National Power Corporation (hereinafter called "the Employer") as Oblige, in the sum of (*amount in words & figures as prescribed in the bidding documents*), callable on demand, for the payment of which sum, well and truly to be made, we, the said Principal and Surety bind ourselves, our successors and assigns, jointly and severally, firmly by these presents.

SEALED with our seals and dated this _____ day of _____ 20 _____

WHEREAS, the Principal has submitted a written Bid to the Employer dated the _____ day of _____ 20 _____, for the _____ (hereinafter called "the Bid").

NOW, THEREFORE, the conditions of this obligation are:

- 1) if the Bidder withdraws his Bid during the period of bid validity specified in the Bidding Documents; or
- 2) if the Bidder does not accept the correction of arithmetical errors of his bid price in accordance with the Instructions to Bidder; or
- 3) if the Bidder, having determined as the LCB, fails or refuses to submit the required tax clearance, latest income and business tax returns and PhilGEPS registration certificate within the prescribed period; or
- 4) if the Bidder having been notified of the acceptance of his bid and award of contract to him by the Entity during the period of bid validity:
 - d) fails or refuses to execute the Contract; or
 - e) fails or refuses to submit the required valid JVA, if applicable; or
 - f) fails or refuses to furnish the Performance Security in accordance with the Instructions to Bidders;

then this obligation shall remain in full force and effect, otherwise it shall be null and void.

PROVIDED HOWEVER, that the Surety shall not be:

- a) liable for a greater sum than the specified penalty of this bond, nor
- b) liable for a greater sum than the difference between the amount of the said Principal's Bid and the amount of the Bid that is accepted by the Employer.

Standard Form Number: NPCSF-INFR-06b
Page 2 of 2

This Surety executing this instrument hereby agrees that its obligation shall be valid for 120 calendar days after the deadline for submission of Bids as such deadline is stated in the Instructions to Bidders or as it may be extended by the Employer, notice of which extension(s) to the Surety is hereby waived.

PRINCIPAL _____ SURETY _____

SIGNATURE(S) _____ SIGNATURES(S) _____

NAME(S) AND TITLE(S) _____ NAME(S) _____

SEAL _____ SEAL _____

Standard Form No: NPCSF-INFR-06c

REPUBLIC OF THE PHILIPPINES)
CITY OF _____) S.S.**BID-SECURING DECLARATION**
CONCRETING OF PATHWAY FROM FOREBAY TO DAM AT BALONGBONG HEPP
(LuzP21Z1265Sc)To: **National Power Corporation**
BIR Road cor. Quezon Ave.
Diliman, Quezon CityI/We¹, the undersigned, declare that:

1. I/We understand that, according to your conditions, bids must be supported by a Bid Security, which may be in the form of a Bid-Securing Declaration.
2. I/We accept that: (a) I/we will be automatically disqualified from bidding for any contract with any procuring entity for a period of two (2) years upon receipt of your Blacklisting Order; and, (b) I/we will pay the applicable fine provided under Section 6 of the Guidelines on the Use of Bid Securing Declaration, within fifteen (15) days from receipt of the written demand by the Procuring Entity for the commission of acts resulting to the enforcement of the Bid Securing Declaration under Sections 23.1 (b), 34.2, 40.1 and 69.1, except 69.1 (f) of the IRR of R.A. 9184; without prejudice to other legal action the government may undertake.
3. I/We understand that this Bid-Securing Declaration shall cease to be valid on the following circumstances:
 - (a) Upon expiration of the bid validity period, or any extension thereof pursuant to your request;
 - (b) I am/we are declared ineligible or post-disqualified upon receipt of your notice to such effect, and (i) I/we failed to timely file a request for reconsideration or (ii) I/we filed a waiver to avail of said right;
 - (c) I am/we are declared as the bidder with the Lowest Calculated and Responsive Bid, and I/we have furnished the performance security and signed the Contract.

IN WITNESS WHEREOF, I/we have hereunto set my hand this ____ day of ____
20____ at _____, Philippines._____
[Name and Signature of Bidder's Representative/
Authorized Signatory] [Signatory's legal capacity]
Affiant**[Jurat]***[Format shall be based on the latest Rules on Notarial Practice]*¹ Select one and delete the other. Adopt same instruction for similar terms throughout the document.

Standard Form No: NPCSF-INFR-07

Omnibus Sworn Statement (Revised)**REPUBLIC OF THE PHILIPPINES)**
CITY/MUNICIPALITY OF _____) S.S.**AFFIDAVIT**

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

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

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

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

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

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

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

3. [Name of Bidder] is not "blacklisted" or barred from bidding by the Government of the Philippines or any of its agencies, offices, corporations, or Local Government Units, foreign government/foreign or international financing institution whose blacklisting rules have been recognized by the Government Procurement Policy Board, by itself or by relation, membership, association, affiliation, or controlling interest with another blacklisted person or entity as defined and provided for in the Uniform Guidelines on Blacklisting;
4. Each of the documents submitted in satisfaction of the bidding requirements is an authentic copy of the original, complete, and all statements and information provided therein are true and correct;
5. [Name of Bidder] is authorizing the Head of the Procuring Entity or its duly authorized representative(s) to verify all the documents submitted;

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

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

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

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

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

7. *[Name of Bidder]* complies with existing labor laws and standards; and
8. *[Name of Bidder]* is aware of and has undertaken the responsibilities as a Bidder in compliance with the Philippine Bidding Documents, which includes:
 - a. Carefully examining all of the Bidding Documents;
 - b. Acknowledging all conditions, local or otherwise, affecting the implementation of the Contract;
 - c. Making an estimate of the facilities available and needed for the contract to be bid, if any; and
 - d. Inquiring or securing Supplemental/Bid Bulletin(s) issued for the *[Name of the Project]*.
9. *[Name of Bidder]* did not give or pay directly or indirectly, any commission, amount, fee, or any form of consideration, pecuniary or otherwise, to any person or official, personnel or representative of the government in relation to any procurement project or activity.
10. In case advance payment was made or given, failure to perform or deliver any of the obligations and undertakings in the contract shall be sufficient grounds to constitute criminal liability for Swindling (Estafa) or the commission of fraud with unfaithfulness or abuse of confidence through misappropriating or converting any payment received by a person or entity under an obligation involving the duty to deliver certain goods or services, to the prejudice of the public and the government of the Philippines pursuant to Article 315 of Act No. 3815 s. 1930, as amended, or the Revised Penal Code.

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

*[Insert NAME OF BIDDER OR ITS AUTHORIZED
REPRESENTATIVE]*

[Insert signatory's legal capacity]
Affiant

[Jurat]

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

Standard Form Number: NPCSF-INFR-08

CONTRACTOR'S ORGANIZATIONAL CHART FOR THE CONTRACT

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

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

NOTES:

1. *This organization chart should represent the "Contractor's Organization" required for the Project, and not the organizational chart of the entire firm.*
2. *Each such nominated engineer/key personnel shall comply with and submit duly accomplished forms NPCSF-INFR-10a, NPCSF-INFR-10b and NPCSF-INFR-11.*
3. *All these are required to be in the Technical Envelope of the Bidder.*

Standard Form Number: NPCSF-INFR-09

LIST OF KEY PERSONNEL PROPOSED TO BE ASSIGNED TO THE CONTRACT
(Based on the Minimum Key Personnel Required in the Bidding Documents)

Business Name: _____
Business: _____

	DESIGNATION				
1	Name				
2	Address				
3	Date of Birth				
4	Employed Since				
5	Experience				
6	Previous Employment				
7	Education				
8	PRC License				

Required Attachments:

1. Certificate of Employment, Bio Data and Construction Safety and Health Training Certificate of the Safety Officer
2. Certificate of Employment, Bio Data and valid PRC License of the (professional) personnel
3. Certificate of Employment, Bio Data and accreditation from DPWH as Materials Engineer for the Materials Engineer

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

One of the requirements from the bidder to be included in its Technical Envelope is a list of contractor's key personnel (based on the minimum key personnel required in the bidding documents) to be assigned to the contract to be bid, with their complete qualification and experience data (including the key personnel's signed written commitment to work for the project once awarded the contract).



Standard Form Number: NPCSF-INFR-10a

KEY PERSONNEL'S CERTIFICATE OF EMPLOYMENT (PROFESSIONAL PERSONNEL)

THE PRESIDENT

National Power Corporation
 BIR Road cor. Quezon Ave.
 Diliman, Quezon City

Issuance Date

Dear Sir:

I am (Name of Nominee) a Licensed _____ Engineer with Professional License No. _____ issued on (date of issuance) at (place of issuance).

I hereby certify that (Name of Bidder) has engaged my services as (Designation) for the (Name of Project), if awarded to it.

As (Designation), I supervised the following completed projects similar to the contract under bidding:

NAME OF PROJECT	OWNER	COST	DATE COMPLETED
_____	_____	_____	_____

At present, I am supervising the following projects:

NAME OF PROJECT	OWNER	COST	DATE COMPLETED
_____	_____	_____	_____

In case of my separation for any reason whatsoever from the above-mentioned Contractor, I shall notify the National Power Corporation at least twenty one (21) days before the effective date of my separation.

As (Designation), I know I will have to stay in the job site all the time to supervise and manage the Contract works to the best of my ability, and aware that I am authorized to handle only one (1) contract at a time.

I do not allow the use of my name for the purpose of enabling the above-mentioned Contractor to qualify for the Contract without any firm commitment on my part to assume the post of (Designation) therefor, if the contract is awarded to him since I understand that to do so will be a sufficient ground for my disqualification as (Designation) in any future National Power Corporation bidding or employment with any Contractor doing business with the National Power Corporation.

 (Name and Signature)
 AFFIANT

[Jurat]

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

One of the requirements from the bidder to be included in its Technical Envelope is a list of contractor's key personnel (viz. Project Manager, Project Engineer, Construction Safety Officer, Foremen, etc), to be assigned to the contract to be bid, with their complete qualification and experience data (including the key personnel's signed written commitment to work for the project once awarded the contract).

SECTION VIII – BIDDING FORMS

Standard Form Number: NPCSF-INFR-10b

**KEY PERSONNEL'S CERTIFICATE OF EMPLOYMENT
(CONSTRUCTION SAFETY AND HEALTH OFFICER)**_____
Issuance Date**THE PRESIDENT**National Power Corporation
BIR Road cor. Quezon Ave.
Diliman, Quezon City

Dear Sir:

I am (Name of Nominee) an Construction Safety & Health Officer with Certificate No. _____ issued on (date of issuance) at (place of issuance).

I hereby certify that (Name of Bidder) has engaged my services as Construction Safety & Health Officer for the (Name of Project), if awarded to it.

I am the Construction Safety & Health Officer of the following completed projects similar to the contract under bidding:

NAME OF PROJECT	OWNER	COST	DATE COMPLETED
_____	_____	_____	_____

At present, I am the Construction Safety & Health Officer of the following projects:

NAME OF PROJECT	OWNER	COST	DATE COMPLETED
_____	_____	_____	_____

In case of my separation for any reason whatsoever from the above-mentioned Contractor, I shall notify the National Power Corporation at least twenty one (21) days before the effective date of my separation.

As Construction Safety & Health Officer, I know I will have to stay in the job site all the time and aware that I am authorized to handle only one (1) contract at a time.

I do not allow the use of my name for the purpose of enabling the above-mentioned Contractor to qualify for the Contract without any firm commitment on my part to assume the post of Construction Safety & Health Officer, if the contract is awarded to him since I understand that to do so will be a sufficient ground for my disqualification as Construction Safety & Health Officer in any future National Power Corporation bidding or employment with any Contractor doing business with the National Power Corporation.

(Name and Signature)
AFFIANT**[Jurat]***[Format shall be based on the latest Rules on Notarial Practice]*

One of the requirements from the bidder to be included in its Technical Envelope is a list of contractor's key personnel (viz. Project Manager, Project Engineer, Construction Safety Officer, Foremen, etc), to be assigned to the contract to be bid, with their complete qualification and experience data (including the key personnel's signed written commitment to work for the project once awarded the contract).

Standard Form Number: NPCSF-INFR-11

**KEY PERSONNEL
(FORMAT OF BIO-DATA)**

Give the detailed information of the following personnel who are scheduled to be assigned as full-time field staff for the project. Fill up a form for each person.

1. Name : _____
2. Date of Birth : _____
3. Nationality : _____
4. Education and Degrees : _____
5. Specialty : _____
6. Registration : _____
7. Length of Service with the Firm : _____ Year from _____ (months) _____ (year)
To _____ (months) _____ (year)
8. Years of Experience : _____
9. If Item 7 is less than ten (10) years, give name and length of service with previous employers for a ten (10)-year period (attached additional sheet/s), if necessary:

Name and Address of EmployerLength of Service

_____	_____ year(s) from _____ to _____
_____	_____ year(s) from _____ to _____
_____	_____ year(s) from _____ to _____

10. Experience:

This should cover the past ten (10) years of experience. (Attached as many pages as necessary to show involvement of personnel in projects using the format below).

Standard Form Number: NPCSF-INFR-11

One of the requirements from the bidder to be included in its Technical Envelope is a list of contractor's key personnel (viz. Project Manager, Project Engineer, Construction Safety Officer, Foremen, etc), to be assigned to the contract to be bid, with their complete qualification and experience data (including the key personnel's signed written commitment to work for the project once awarded the contract).

Page 2 of 2

1. Name : _____
2. Name and Address of Owner : _____
3. Name and Address of the
Owner's Engineer
(Consultant) : _____
4. Indicate the Features of Project
(particulars of the project
components and any other particular
interest connected with the project): _____
5. Contract Amount Expressed in
Philippine Currency : _____
6. Position : _____
7. Structures for which the employee
was responsible : _____
8. Assignment Period : from _____ (months) _____ (years)
: to _____ (months) _____ (years)

Name and Signature of Employee

It is hereby certified that the above personnel can be assigned to this project, if the contract is awarded to our company.

(Place and Date)_____
(The Authorized Representative)

One of the requirements from the bidder to be included in its Technical Envelope is a list of contractor's key personnel (viz. Project Manager, Project Engineer, Construction Safety Officer, Foremen, etc), to be assigned to the contract to be bid, with their complete qualification and experience data (including the key personnel's signed written commitment to work for the project once awarded the contract).

Standard Form Number: NPCSF-INFR-12

LIST OF EQUIPMENT, OWNED OR LEASED AND/OR UNDER PURCHASE AGREEMENTS
(Based on the Minimum Equipment Required in the Bidding Documents)

Business Name: _____
Business: _____

Description	Model/Year	Capacity / Performance / Size	Plate No.	Motor No. / Body No.	Location	Condition	Proof of Ownership / Lessor or Vendor
A. Owned							
i.							
ii.							
iii.							
iv.							
v.							
B. Leased							
i.							
ii.							
iii.							
iv.							
v.							
C. Under Purchase Agreements							
i.							
ii.							
iii.							
iv.							
v.							

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

One of the requirements from the bidder to be included in its Technical Envelope is the list of its equipment units pledged for the contract to be bid, based on minimum equipment required in the bidding docs. which are owned (supported by proof/s of ownership), leased, and/or under purchase agreements (with corresponding engine numbers, chassis numbers and/or serial numbers), supported by certification of availability of equipment from the equipment lessor/vendor for the duration of the project

Standard Form No. : NPCSF-INFR-13

BID LETTER

Date: _____

To: **THE PRESIDENT**
National Power Corporation
BIR Road cor. Quezon Ave.
Diliman, Quezon City

We, the undersigned, declare that:

- (a) We have examined and have no reservation to the Bidding Documents, including Addenda, for the Contract **CONCRETING OF PATHWAY FROM FOREBAY TO DAM AT BALONGBONG HEPP (LuzP21Z1265Sc)**.

- (b) We offer to execute the Works for this Contract in accordance with the Bid Documents, Technical Specifications, General and Special Conditions of Contract accompanying this Bid;

The total price of our Bid, excluding any discounts offered below is: [insert information] _____;

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

- (c) Our Bid shall be valid for a period of [insert number] _____ days from the date fixed for the Bid submission deadline in accordance with the Bidding Documents, and it shall remain binding upon us and may be accepted at any time before the expiration of that period;
- (d) If our Bid is accepted, we commit to obtain a Performance Security in the amount of [insert percentage amount] _____ percent of the Contract Price for the due performance of the Contract;
- (e) Our firm, including any subcontractors or suppliers for any part of the Contract, have nationalities from the following eligible countries: [insert information] _____;
- (f) We are not participating, as Bidders, in more than one Bid in this bidding process, other than alternative offers in accordance with the Bidding Documents;
- (g) Our firm, its affiliates or subsidiaries, including any subcontractors or suppliers for any part of the Contract, has not been declared ineligible by the Funding Source;
- (h) We understand that this Bid, together with your written acceptance thereof included in your notification of award, shall constitute a binding contract between us, until a formal Contract is prepared and executed; and
- (i) We understand that you are not bound to accept the Lowest Calculated Bid or any other Bid that you may receive.

- (j) We likewise certify/confirm that the undersigned, is the duly authorized representative of the bidder, and granted full power and authority to do, execute and perform any and all acts necessary to participate, submit the bid, and to sign and execute the ensuing contract for the **CONCRETING OF PATHWAY FROM FOREBAY TO DAM AT BALONGBONG HEPP (LuzP21Z1265Sc)** of the National Power Corporation.
- (k) We acknowledge that failure to sign each and every page of this Bid Letter, including the Bill of Quantities, shall be a ground for the rejection of our bid.

Name: _____

In the capacity of: _____

Signed: _____

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

Date: _____

Standard Form No. : NPCSF-INFR-14

DETAILED COST ESTIMATE FORM

Name of Bidder : _____

[illegible]

Name, Signature of Authorized Representative

Designation

Standard Form No. : NPCSF-INFR-15

**SUMMARY SHEETS OF MATERIALS PRICES, LABOR RATES
AND EQUIPMENT RENTAL RATES**

Name of Bidder : _____

I. Unit Prices of Materials

Materials Description	Unit	Unit Price
1.		
2.		
3.		
4.		
5.		
6.		
7.		

II. Manpower Hourly Rates

Designation	Rate/Hr.
1.	
2.	
3.	
4.	
5.	
6.	
7.	

III. Equipment Hourly Rental Rates

Equipment Description	Rental Rate/Hr.
1.	
2.	
3.	
4.	
5.	
6.	
7.	

Name, Signature of Authorized Representative_____
Designation

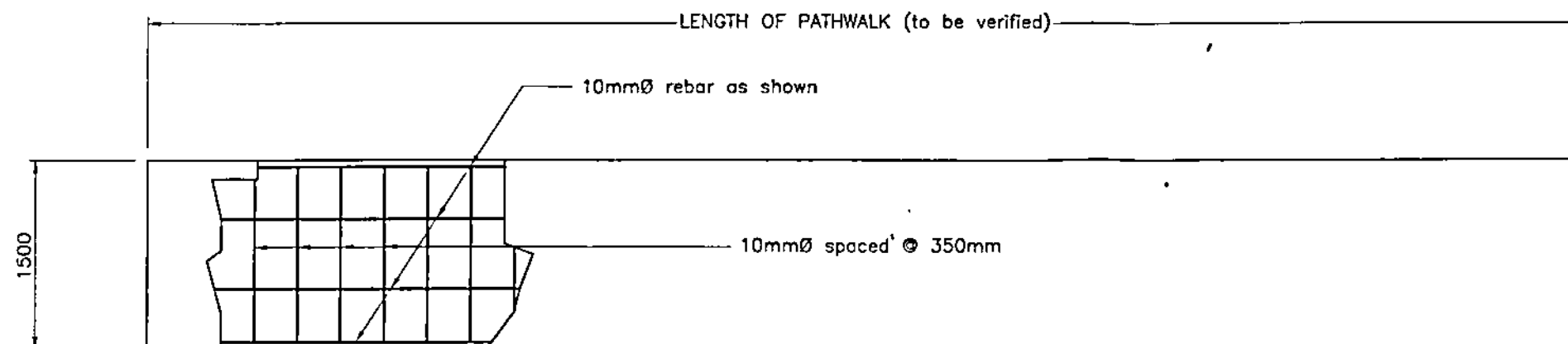
SECTION IX

BID DRAWINGS

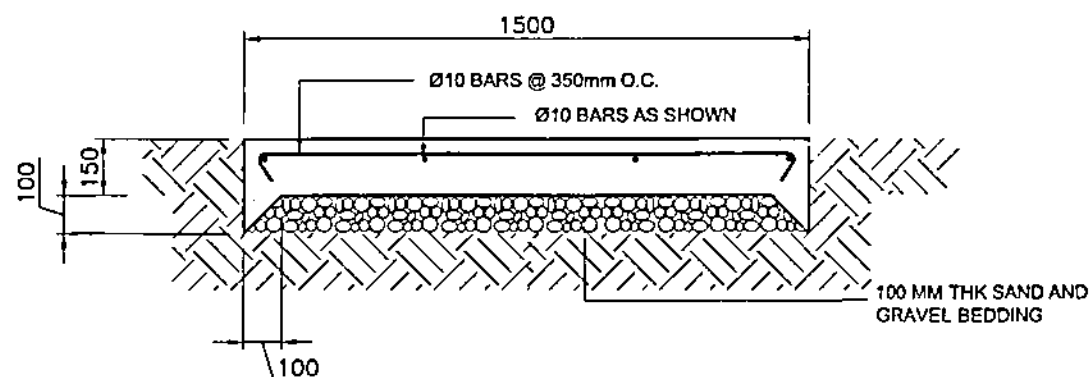
SECTION IX – BID/REFERENCE DRAWINGS**CW – CIVIL WORKS**

<u>DRAWING NO.</u>	<u>TITLE</u>
PWBH-BDC-18.001	SITE DEVELOPMENT PLAN (BALONGBONG HEPP)
PWBH-BDC-18.001	CONCRETE PATHWALK (PLAN, FOUNDATION & DETAILS)








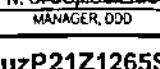
CONCRETE PATHWALK PLAN
SCALE 1:50



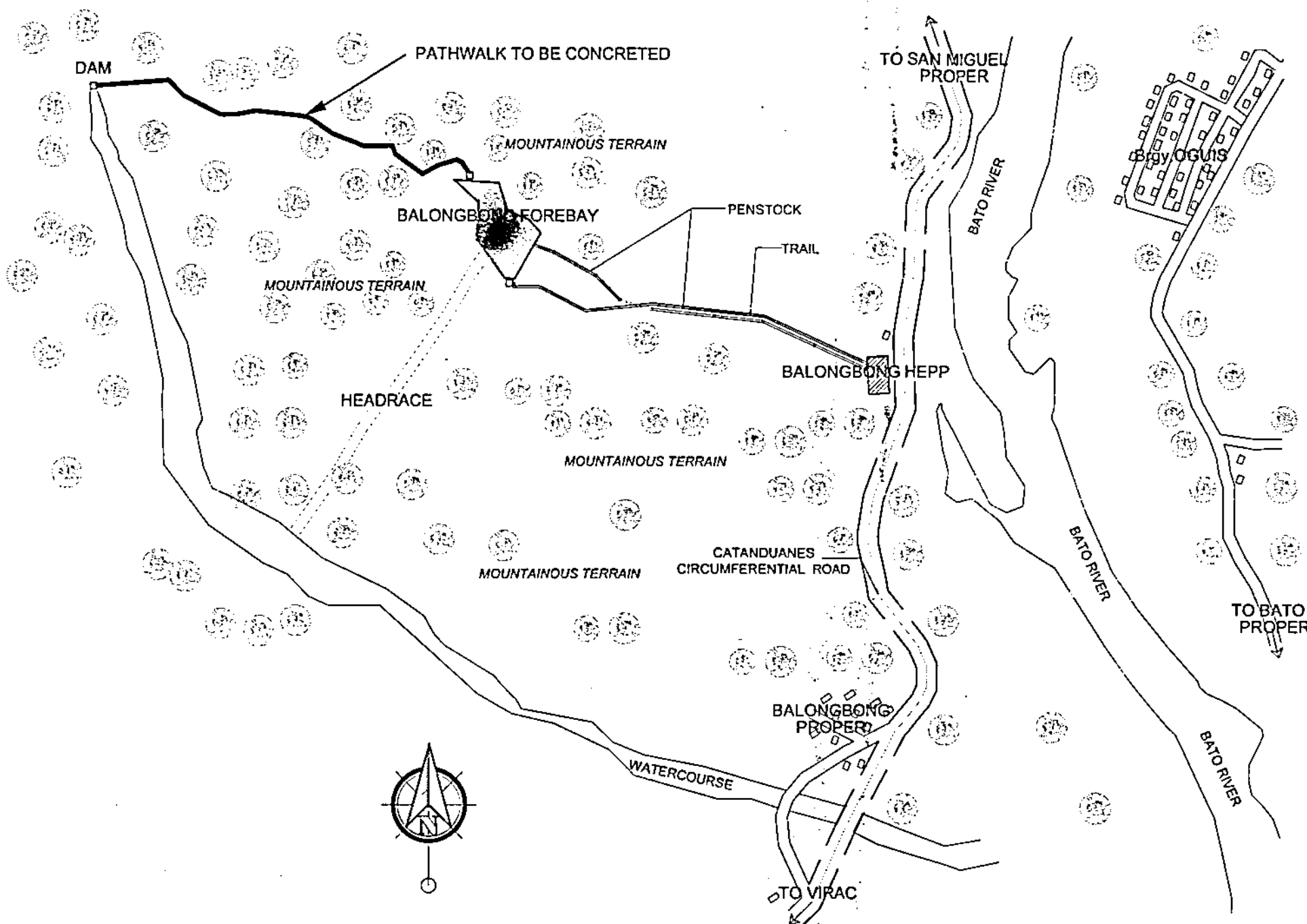
CONCRETE PATHWALK DETAIL
SCALE 1:20

NOTE:

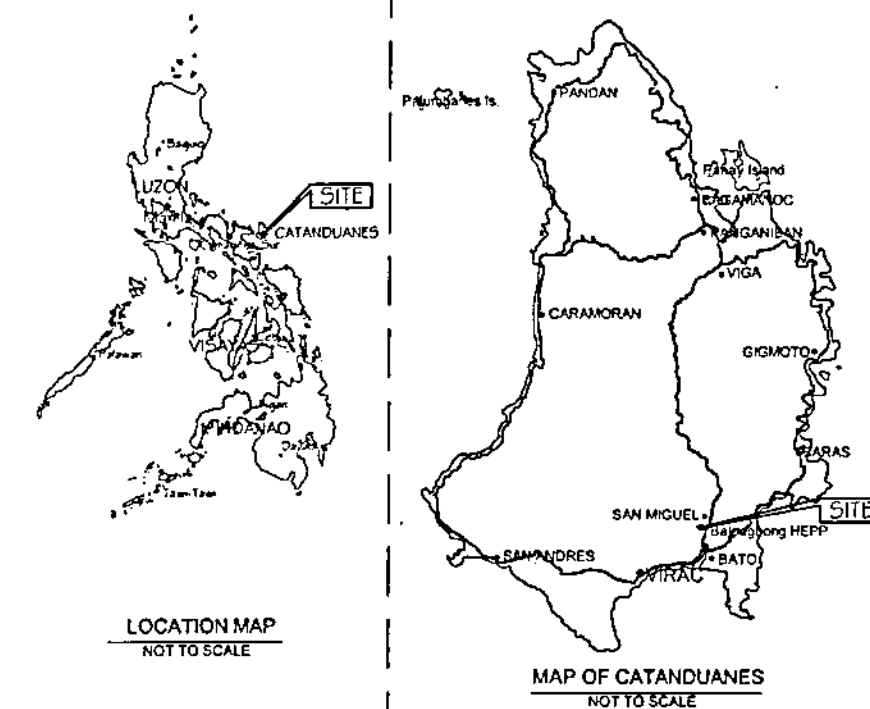
1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE INDICATED.
2. THIS DRAWING IS FOR REPRESENTATION ONLY, THE CONTRACTOR SHALL PERFORM THE WORKS BASED ON THE ACTUAL SITE CONDITION.
3. MINIMUM COMPRESSIVE STRENGTH OF CONCRETE SHALL BE 17.24 MPa.
4. REINFORCING BARS SHALL CONFORM TO THE REQUIREMENTS SPECIFIED IN ASTM A615 AND PNS 49.
5. ALL ASPECTS OF CONSTRUCTION AND DETAILING OF REINFORCEMENTS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE ACI CODE.

OWNER:		 NATIONAL POWER CORPORATION AGHAM ROAD, DILIMAN, QUEZON CITY	
PROJECT: CONCRETING OF PATHWALK FROM FOREBAY TO DAM AT BALONGBONG HEP			
LOCATION: BALONGBONG, BATO, CATANDUANES			
TITLE: CONCRETE PATHWALK (PLAN, SECTION & DETAILS)			
DESIGNED	BY	CHKD	DATE
DRAWN	DJBOUAS		
REVIEWED	PRINCIPAL ENGR. / ARCHT.		
CIVIL/ARCHT.			
ELEC.			
MECH.			
SUBMITTED:		 H. L. MENDOZA PRINCIPAL ENGINEER / CEAD	
RECOMMENDED:		 A. C. ESBIRITU MANAGER / CEAD	
APPROVED:		 N. G. SUMBISERA MANAGER, DOD	
DWG. NO. PWBH-BDC-18.002		SPECS. NO. LuzP21Z1265Sc	
SCALE: AS SHOWN		BID DRAWING	
REV. 0			

REV.	DATE	NATURE OF REVISION	BY	CHKD.	RECD.	APPD.



SITE DEVELOPMENT PLAN
SCALE _____ NTS



NOTE:

1. ALL DIMENSIONS ARE IN MILLIMETER UNLESS OTHERWISE INDICATED.
2. ACTUAL ELEVATION AND LOCATION OF THE PATHWALK SHALL BE VERIFIED ON SITE PRIOR TO CONSTRUCTION AND IS THE RESPONSIBILITY OF THE CONTRACTOR.
3. REINFORCING BARS SHALL CONFORM TO REQUIREMENTS SPECIFIED IN ASTM 615 AND PNS 49.
4. ALL ASPECTS OF CONSTRUCTION AND DETAILING OF REINFORCEMENTS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE ACI CODE.

OWNER:				NATIONAL POWER CORPORATION AGHAM ROAD, DILIMAN, QUEZON CITY	
PROJECT: CONCRETING OF PATHWALK FROM FOREBAY TO DAM AT BALONGBONG HEP					
LOCATION: BALONGBONG, BATO, CATANDUANES					
TITLE: SITE DEVELOPMENT PLAN (BALONGBONG HEPP)					
DESIGNED	BY	CHKD	DATE	SUBMITTED:	 H. L. MENDOZA PRINCIPAL ENGINEER / CEAD
DRAWN	DJSOUAS			RECOMMENDED:	 A. C. BSPIRITU MANAGER / CEAD
REVIEWED	PRINCIPAL ENGR / ARCHT.			APPROVED:	 H. G. SUMOSIER MANAGER, DDO
CIVIL/ARCHT					
ELEC.					
MECH.					
DWG. NO. PWBH-BDC-18.001			SPECS. NO. LuzP21Z1265Sc		
SCALE: AS SHOWN			BID DRAWING		
REV. 0					

REV.	DATE	NATURE OF REVISION	BY	CHKD.	RECD.	APPD.