



Republic of the Philippines  
DEPARTMENT OF AGRICULTURE  
National Irrigation Administration  
Central Office

**SUPPLEMENTAL BID BULLETIN NO. 2**

**to the**

**BID DOCUMENTS**

**for the**

**Construction of Calapangan Earthfill Dam and Its Appurtenant Structures  
in Region 2 under Small Reservoir Irrigation Project**

**ITB No. R2-CSRIPD-C-38**

- A. Please be advised of the following changes in the procurement schedule for the above-captioned project:

Last day of Posting of Supplemental Bid Bulletin	-	January 12, 2024
Deadline of Submission of Bids	-	January 19, 2024, 12:00 N.N. BAC-A Secretariat Office 6 <sup>th</sup> Floor, NIA Building A EDSA, Quezon City
Opening of Bids	-	January 19, 2024, 2:00 P.M. BAC-A Conference Room 6 <sup>th</sup> Floor, NIA Building A EDSA, Quezon City

- B. Please be advised of the following revisions in the Bidding Documents for the above-captioned project:

1. Delete pages 18 to 21 under Section III. Bid Data Sheet of the Bidding Documents, and substitute the herein Attachment Sheet Nos. "1" to "4";
2. Delete pages 28 and 34 under Section V. Special Conditions of Contract of the Bidding Documents, and substitute the herein Attachment Sheet Nos. "5" and "6";
3. Delete pages SI-1 and SI-2 under Section V-B. Supplemental Information of the Bidding Documents, and substitute the herein Attachment Sheet Nos. "7" to "9";
4. Delete pages 1 to 8 under Section VIII. Bill of Quantities of the Bidding Documents, and substitute the herein Attachment Sheet Nos. "10" to "17";

5. Delete pages 51, 53, 62, 63, and 64 under Section IX-A. Bidding Forms of the Bidding Documents, and substitute the herein Attachment Sheet Nos. "18" to "22";
  6. Delete pages TS-VI-1 to TS-VI-15 under Section VI. Dam Embankment of the Technical Specifications, and substitute the herein Attachment Sheet Nos. "23" to "37"; and
  7. Delete page TS-XVII-8 under Section XVII. Dam Instrumentation of the Technical Specifications, and substitute the herein Attachment Sheet Nos "38".
- C. The Minutes of Pre-bidding Conference is attached as Annex "A" for reference.
- D. Receipt of this Notice must be acknowledged by the Bidders at the Office of the BAC-A Secretariat, 6th Floor, NIA Building "A", EDSA, Diliman, Quezon City.
- E. This Notice shall form part of the Bidding Documents.



**ENGR. ROBERT C. SUGUITAN**  
BAC-A Chairperson

## Bid Data Sheet

ITB Clause													
5.2	<p>For this purpose, contracts <b>similar</b> to the Project refer to contracts which have the same major categories of work, which shall be:</p> <p>Construction of Dam/ Embankment Dam (for agricultural and/or hydropower projects) and/or Flood Control Projects (Protection Dikes and/or Sabo Dam and/or Floodway) and/or Irrigation Canal/Canal Structures, and/or other Major Hydraulic Structures and/or Structures for Irrigation with a value of at least fifty percent (50%) of ABC. All prospective bidders should possess a valid PCAB license with a Principal Classification and Category in General Engineering as "AAA" and Registration Particulars with respective size range of <b>Large "B"</b> in Dam, Reservoir or Tunneling, and/or Irrigation Facilities and Flood Control.</p>												
7.1	<p>Subcontracting is allowed, subject to evaluation and approval of the subcontracting agreement in accordance with NIA MC No. 37, s.2014. The subcontractor shall undertake not more than 50% of the contract works.</p> <p><i><b>NOTE:</b> The contractor shall undertake not less than 50% of the contracted works with its own resources.</i></p>												
10.1	<p>The prospective bidder shall submit a <u>Certificate of Site Inspection</u> duly signed by the authorized NIA Region II employee/official - Engr. Orlando R. Espejo, Division Manager, NIA Region II- Engineering and Operations Division.</p>												
10.3	<p>No further instructions</p>												
10.4	<p>The key personnel must meet the required minimum years of experience set below:</p> <table border="1" data-bbox="368 1285 1407 2011"> <thead> <tr> <th data-bbox="368 1285 751 1341"><u>Key Personnel</u></th><th data-bbox="751 1285 1407 1341"><u>Relevant Experience</u></th></tr> </thead> <tbody> <tr> <td data-bbox="368 1341 751 1476">1 – Project Manager</td><td data-bbox="751 1341 1407 1476">– A licensed Civil Engineer (PRC License) with at least five (5) year experience as Project Manager;</td></tr> <tr> <td data-bbox="368 1476 751 1610">1 – Project Engineer</td><td data-bbox="751 1476 1407 1610">– A licensed Civil Engineer (PRC License) with at least three (3) year experience as Project Engineer in similar works;</td></tr> <tr> <td data-bbox="368 1610 751 1767">2 – Office Engineer</td><td data-bbox="751 1610 1407 1767">– A Licensed Civil Engineer (PRC License) with at least one (1) year experience in engineering works with AUTOCAD training certificate;</td></tr> <tr> <td data-bbox="368 1767 751 1901">1 – Materials Engineer II</td><td data-bbox="751 1767 1407 1901">– With at least two (2) years' experience as Materials Engineer II duly accredited by the DPWH;</td></tr> <tr> <td data-bbox="368 1901 751 2011">1 – Mechanical Engineer</td><td data-bbox="751 1901 1407 2011">– A Licensed Mechanical Engineer (PRC License) with at least three (3) year experience in Mechanical Works;</td></tr> </tbody> </table>	<u>Key Personnel</u>	<u>Relevant Experience</u>	1 – Project Manager	– A licensed Civil Engineer (PRC License) with at least five (5) year experience as Project Manager;	1 – Project Engineer	– A licensed Civil Engineer (PRC License) with at least three (3) year experience as Project Engineer in similar works;	2 – Office Engineer	– A Licensed Civil Engineer (PRC License) with at least one (1) year experience in engineering works with AUTOCAD training certificate;	1 – Materials Engineer II	– With at least two (2) years' experience as Materials Engineer II duly accredited by the DPWH;	1 – Mechanical Engineer	– A Licensed Mechanical Engineer (PRC License) with at least three (3) year experience in Mechanical Works;
<u>Key Personnel</u>	<u>Relevant Experience</u>												
1 – Project Manager	– A licensed Civil Engineer (PRC License) with at least five (5) year experience as Project Manager;												
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1 – Materials Engineer II	– With at least two (2) years' experience as Materials Engineer II duly accredited by the DPWH;												
1 – Mechanical Engineer	– A Licensed Mechanical Engineer (PRC License) with at least three (3) year experience in Mechanical Works;												



	<div><div>1 – Electrical Engineer</div><div>– A Licensed Electrical Engineer (PRC License) with at least three (3) year experience in Electrical Works;</div></div> <div><div>1 – Civil Engineer</div><div>– A Licensed Civil Engineer (PRC License) with at least 3 years of experience in Geotechnical works;</div></div> <div><div>1 – Geologist</div><div>– A Licensed Geologist (PRC License) with at least three (3) year experience in Dam Embankment foundation treatment;</div></div> <div><div>1 – Safety/Health Officer</div><div>– With Training Certificate duly accredited by DOLE and with at least two (2) year experience as Safety Officer;</div></div> <div><div>1 – Geodetic Engineer</div><div>– With at least two (2) year experience as Geodetic Engineer (PRC License);</div></div> <div><div>3 – Foreman:</div><div></div></div> <div><div>2 – for Earthworks</div><div>– With at least three (3) year experience as Foreman for Earthworks;</div></div> <div><div>1 – for Concreting</div><div>– With at least three (3) year experience as Foreman for concreting and/or other related works.</div></div> <div><div>No replacement of personnel shall be allowed by NIA until after fifty percent (50%) of the project has been completed, except for justifiable reason to be approved by NIA Regional Office 2.</div></div>																																												
10.5	<div>The minimum major equipment requirements are the following:</div> <table><tr><th colspan="2">Type of Equipment</th><th colspan="2">Quantity</th></tr><tr><td>1</td><td>Trailer Truck (Lowbed)</td><td>1</td><td>unit</td></tr><tr><td>2</td><td>Cargo Truck</td><td>2</td><td>units</td></tr><tr><td>3</td><td>Dozer, Crawler (180 hp) *</td><td>2</td><td>units</td></tr><tr><td>4</td><td>Dozer with Hydraulic Ripper, Crawler (240 hp) *</td><td>2</td><td>units</td></tr><tr><td>5</td><td>Loader, Wheel Type (2.0 cu.m bucket capacity, 124 hp) *</td><td>3</td><td>units</td></tr><tr><td>6</td><td>Hydraulic Backhoe, Crawler (1.0 cu.m. bucket capacity) *</td><td>9</td><td>units</td></tr><tr><td>7</td><td>Hydraulic Backhoe with Breaker, Crawler (1.0 cu.m. bucket capacity)*</td><td>2</td><td>units</td></tr><tr><td>8</td><td>Self-Propelled Tandem Smooth Drum, Vibratory (12 Tons capacity) *</td><td>3</td><td>units</td></tr><tr><td>9</td><td>Self-Propelled Single Tamping Foot, Vibratory (12.7 Tons capacity) *</td><td>2</td><td>units</td></tr><tr><td>10</td><td>Road Grader, Motorized (125 hp) *</td><td>2</td><td>units</td></tr></table>	Type of Equipment		Quantity		1	Trailer Truck (Lowbed)	1	unit	2	Cargo Truck	2	units	3	Dozer, Crawler (180 hp) *	2	units	4	Dozer with Hydraulic Ripper, Crawler (240 hp) *	2	units	5	Loader, Wheel Type (2.0 cu.m bucket capacity, 124 hp) *	3	units	6	Hydraulic Backhoe, Crawler (1.0 cu.m. bucket capacity) *	9	units	7	Hydraulic Backhoe with Breaker, Crawler (1.0 cu.m. bucket capacity)*	2	units	8	Self-Propelled Tandem Smooth Drum, Vibratory (12 Tons capacity) *	3	units	9	Self-Propelled Single Tamping Foot, Vibratory (12.7 Tons capacity) *	2	units	10	Road Grader, Motorized (125 hp) *	2	units
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11	Hydraulic Crane (30 Tons capacity, 210 hp) *	1	unit
12	Concrete Batching Plant *	1	unit
13	Dump Truck (12 cu.m. Capacity) *	12	units
14	Transit Mixer (8.0 cu.m. capacity) *	4	units
15	Water Truck (16,000 liters capacity)	2	units
16	Concrete Mixer, One Bagger	2	units
17	Concrete Vibrator	4	units
18	Welding Machine, 300 Ampere	3	units
19	Bar Cutter	3	units
20	Bar Bender	2	units
21	Material Testing Equipment (Field Density Equipment)	2	units
22	Survey Equipment (Total Station)*	1	unit
23	Survey Equipment (RTK)*	1	unit
24	Air Compressor, 160 CFM	2	units
25	Hydraulic Rotary Drill Machine (25-30 HP)*	3	units
26	Crawler Air Drill	2	units
27	Water Pump, 4" diameter, engine-driven	2	units
28	Submersible Water Pump 4" diameter	4	units
29	Grout Pump (Agitator, Central Mixer, Compressor)*	4	units
30	Generator Set, 125 KVA	2	units
31	Generator Set, 60 KVA	1	unit
32	Pumpcrete with Truck and Boom	1	unit
33	Chainsaw	4	units
34	Tractor Skidder	1	unit
35	Tamping Rammer	1	unit
36	Service Vehicle for NIA Engineer (Pick-up Truck, 4x4)*	1	unit
<p>* <u>All of the Major Equipment must be in A1 condition and at least 30% must be owned by the Bidder. No replacement shall be made throughout the contract duration without prior written approval of NIA Regional Office 2.</u></p> <p>* <u>In reference to NIA Memorandum Circular No. 56, s. 2007, A1 Condition is defined as a condition wherein the equipment is in good operating condition and within its economic life. It can be relied upon to operate efficiently and effectively up to the duration of the assigned activity or series of activities.</u></p>			

	<p><u>For Brand-New Service Vehicle:</u></p> <p>The Contractor must provide within twenty (20) calendar days upon receipt of notice to proceed, a brand-new one (1) unit 4x4 Pick-up Type Service Vehicle exclusive for NIA Resident Engineer use, must have comprehensive insurance, and must provide preventive maintenance for the entire project duration.</p> <p>NIA shall provide a driver and shall supply appropriate fuel which is sufficient for daily operation during project implementation.</p> <p><u>No replacement of equipment shall be allowed by NIA until after fifty percent (50%) of the project has been completed, except for justifiable reason to be approved by NIA Regional Office 2.</u></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> <ol style="list-style-type: none"> <li>The amount of not less than <b>PhP15,018,957.75</b> (<i>Two percent (2%) of ABC</i>), if bid security is in cash, cashier's/manager's check, bank draft/guarantee or irrevocable letter of credit;</li> <li>The amount of not less than <b>PhP37,547,394.37</b> [<i>Five percent (5%) of ABC</i>] if bid security is in Surety Bond.</li> </ol>
16	<p>Each Bidder shall submit one (1) original and two (2) copies of the first and second components of its bid. Original and copies 1 and 2 must reflect the following:</p> <ol style="list-style-type: none"> <li>Table of contents;</li> <li>Should be in sequential order of documents in line with <b>Section IX "Checklist of Technical and Financial Documents"</b>;</li> <li>Proper tabbing and binding of the documents; <b>and</b></li> <li>Copies 1 and 2 must be certified true copy of the original.</li> </ol>
20	No further instructions
21	<p>Additional contract documents relevant to the Project that may be required by existing laws and/or the Procuring Entity, such as construction schedule and S-curve, manpower schedule, construction methods, equipment utilization schedule, construction safety and health program approved by the DOLE, Materials Quality Control Program, and other acceptable tools of project scheduling.</p>



## Special Conditions of Contract

GCC Clause	
2	The Intended Completion Date is <b>1,225</b> calendar days inclusive of <b>326</b> pre-determined unworkable calendar days from the start of the contract.
4.1	The <b>Procuring Entity</b> shall give possession of all parts of the Site to the Contractor at the Start Date of the Contract. The start date of the Contract is upon receipt of the Notice to Proceed.
6	The site investigation reports are: <i>None</i>
7.2	<p><i>[Select one, delete the other.]</i></p> <p><i>[In case of permanent structures, such as buildings of types 4 and 5 as classified under the National Building Code of the Philippines and other structures made of steel, iron, or concrete which comply with relevant structural codes (e.g., DPWH Standard Specifications), such as, but not limited to, steel/concrete bridges, flyovers, aircraft movement areas, ports, dams, tunnels, filtration and treatment plants, sewerage systems, power plants, transmission and communication towers, railway system, and other similar permanent structures:] <b>Fifteen (15) years.</b></i></p> <p><i>[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:] <b>Five (5) years.</b></i></p> <p><i>[In case of other structures, such as bailey and wooden bridges, shallow wells, spring developments, and other similar structures:] <b>Two (2) years.</b></i></p>
10	No dayworks are applicable to the contract.
11.1	<p>The Contractor shall submit the Program of Work to the Procuring Entity's Representative within <b>thirty (30)</b> calendar days of delivery of the Notice to Proceed.</p> <p>The Construction Program shall include, among others, Updates of the PERT/CPM Network, Bar/Ghantt Chart, Manpower and Equipment Utilization Schedules, Updated Cash Flow by Quarter and Payment Schedule and Organizational Chart, Materials Quality Control Program, which was previously submitted pursuant to ITB Clause 21 of the ITB.</p>
11.2	The amount to be withheld for late submission of an updated Program of Work is the <b>whole amount claim in the next Progress Billing.</b>
11.3	<p>Add the following Sub-Clause 11.3.</p> <p>The Contractor is also required to submit a Monthly Statistical Report (MSR) within seven (7) calendar days after the end of each month or reporting period, without cost to the Procuring Entity, consisting of the following information:</p>



	<p>22.2 The Contractor shall maintain records and make reports concerning safety, health and welfare of persons and damage to property as the Engineer may from time to time prescribe.</p> <p>22.3 The Contractor shall report to the Engineer details of any accidents as soon as possible after its occurrence. In case of any fatality or serious accident, the contractor shall in addition, notify the Engineer immediately by the quickest available means.</p>
23	<p><b>23. Joint Survey</b></p> <p>The NIA representative and the Contractor must conduct a “Joint Survey” to validate the Actual Natural Grade Line within 30 Calendar Days upon receipt of the Notice to Proceed (NTP).</p> <p>The conduct of the Joint Survey covers the Project Site (Dam, Diversion Conduit, Spillway, etc.), Borrow, and Disposal Areas.</p> <p>The Contractor shall submit the Joint Survey Drawings/As-staked Plans, reflecting the following details, subject to the approval of NIA within 90 Calendar Days upon receipt of the NTP:</p> <ul style="list-style-type: none"> <li>i. Actual Natural Grade Line;</li> <li>ii. NGL based on the GCF; and</li> <li><b>iii. Structure</b></li> </ul>

## SUPPLEMENTAL INFORMATION

PROJECT: Construction of Calapangan Earthfill Dam and its Appurtenant Structures  
in Region 2 under Small Reservoir Irrigation Project  
Invitation to Bid No. R2-CSRIPD-C-38

1. Site Visit and Inspection, Register at NIA Regional Office II, located in Camasi, Peñablanca, Cagayan
2. List of Officers/Offices to be furnished correspondence from the Contractor.
  - a. The Deputy Administrator  
For Engineering & Operations  
National Irrigation Administration  
3<sup>rd</sup> Floor, DCIEC Building  
EDSA, Diliman, Quezon City
  - b. The Regional Irrigation Manager  
National Irrigation Administration  
Regional Office No. 2  
Camasi, Peñablanca, Cagayan
  - c. The Division Manager  
Cagayan-Batanes IMO  
National Irrigation Administration  
Maddarulog, Solana, Cagayan
3. List of Initial Equipment required to be mobilized within twenty (20) calendar days after receipt of Notice to Proceed, Page TS-1-1, paragraph 101 (b) of Section I.

Type of Equipment		Quantity	
1.	Trailer (Lowbed)	1	unit
2.	Dozer, Crawler (180 hp) *	1	unit
3.	Loader, Wheel Type (2.0 cu.m bucket capacity, 124 hp) *	1	unit
4.	Hydraulic Backhoe, Crawler (1.0 cu.m. bucket capacity) *	2	units
5.	Dump Truck (12 cum. Capacity) *	6	units
6.	Survey Equipment (Total Station)*	1	units
7.	Survey Equipment (RTK)*	1	unit
8.	Service Vehicle for NIA Engineer (Pick-up Truck, 4x4)*	1	unit
9.	Generator Set, 60 KVA	1	unit



## 4. Minimum Equipment Requirements for the Contract:

Type of Equipment		Quantity	
1	Trailer Truck (Lowbed)	1	unit
2	Cargo Truck	2	units
3	Dozer, Crawler (180 hp) *	2	units
4	Dozer with Hydraulic Ripper, Crawler (240 hp) *	2	units
5	Loader, Wheel Type (2.0 cu.m bucket capacity, 124 hp) *	3	units
6	Hydraulic Backhoe, Crawler (1.0 cu.m. bucket capacity) *	9	units
7	Hydraulic Backhoe with Breaker, Crawler (1.0 cu.m. bucket capacity)*	2	units
8	Self-Propelled Tandem Smooth Drum, Vibratory (12 Tons capacity) *	3	units
9	Self-Propelled Single Tamping Foot, Vibratory (12.7 Tons capacity) *	2	units
10	Road Grader, Motorized (125 hp) *	2	units
11	Hydraulic Crane (30 Tons capacity, 210 hp) *	1	unit
12	Concrete Batching Plant *	1	unit
13	Dump Truck (12 cu.m. Capacity) *	12	units
14	Transit Mixer (8.0 cu.m. capacity) *	4	units
15	Water Truck (16,000 liters capacity)	2	units
16	Concrete Mixer, One Bagger	2	units
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21	Material Testing Equipment (Field Density Equipment)	2	units
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31	Generator Set, 60 KVA	1	unit
32	Pumpcrete with Truck and Boom	1	unit
33	Chainsaw	4	units



34	Tractor Skidder	1	unit
35	Tamping Rammer	1	unit
36	Service Vehicle for NIA Engineer (Pick-up Truck, 4x4)*	1	unit

NIA Bid Form

**BILL OF QUANTITIES AND BID PRICES**  
**SMALL RESERVOIR IRRIGATION PROJECT**  
**Construction of Calapangan Earthfill Dam and its Appurtenant Structures in Region 2**  
**Santo Niño, Cagayan**  
**Invitation to Bid No. R2-CSRIPD-C-38**

ITEM NO.	SECTION	DESCRIPTION	QTY.	UNIT	UNIT BID PRICE IN WORDS & IN FIGURES	TOTAL
		<b>I. GENERAL REQUIREMENTS AND PREPARATORY WORKS</b>				
1	Section I	A. Temporary Works, Construction Plant, Mobilization of Construction Equipment and Demobilization Works	1.00	L.S.	P	P
2	Section I-A	B. Construction Safety and Health	1.00	L.S.	P	P
3	Section II	C. Clearing & Grubbing (Including Disposal with AHD=3.5 km)	29,930.74	sq. m.	P	P
4	Section III	D. Diversion & Care of River during Construction and Dewatering	1.00	L.S.	P	P
		<b>II. CIVIL WORKS</b>				
		<b>E. DAM AREA</b>				
5	Section IV	1. Excavation and Foundation preparation a. Common Excavation	73,842.74	cu. m.	P	P
		b. Rock Excavation	1,927.00	cu. m.	P	P
6	Section IV-A	2. Overhaul/Disposal of Waste Materials (AHD=3.5 kms)	64,019.01	cu. m.	P	P
7	Section XV	3. Foundation Drilling and Grouting a. Drilling (Non-Coring)	5,236.00	l.m.	P	P
		b. Stand Pipe (50mm dia. x 1.00m)	444.00	pcs.	P	P
		c. Pressure Grouting	1,309.00	bags	P	P

The undersigned bidder hereby certifies that he has fully informed himself of all conditions, local and otherwise affecting the carrying out of the Contract Works and that his bid has been prepared in strict accordance with the terms and conditions of these Bid Documents.

Name of Firm: \_\_\_\_\_

Name in Print &amp; Signature of Bidder \_\_\_\_\_

NIA Bid Form

**BILL OF QUANTITIES AND BID PRICES**  
**SMALL RESERVOIR IRRIGATION PROJECT**  
**Construction of Calapangan Earthfill Dam and its Appurtenant Structures in Region 2**  
**Santo Niño, Cagayan**  
**Invitation to Bid No. R2-CSRIDP-C-38**

ITEM NO.	SECTION	DESCRIPTION	QTY.	UNIT	UNIT BID PRICE IN WORDS & IN FIGURES	TOTAL
		<b>E. DAM AREA</b>				
		d. Checkhole (Core Drilling)	210.00	l.m.	P _____	P _____
		e. Water Pressure Test	70.00	test	P _____	P _____
8	Section VI	4. Dam Embankment				
		a. Test Fill	1,500.00	cu. m.	P _____	P _____
		b. Impervious Clay Core	88,083.50	cu. m.	P _____	P _____
		c. Random Fill	182,452.61	cu. m.	P _____	P _____
		d. Filter Drain (Sand = 12,477.81 and Gravel = 12,915.52)	25,393.33	cu. m.	P _____	P _____
		e. Rock Toe	3,219.33	cu. m.	P _____	P _____
		f. Gravel Blanket	5,033.93	cu. m.	P _____	P _____
		g. Boulder Riprap	10,217.00	cu. m.	P _____	P _____
		h. Sand Bedding	3,268.16	cu. m.	P _____	P _____
		i. Gravel Ballast	3,316.75	cu. m.	P _____	P _____
9	Section IX	5. Reinforcing Steel Bars, all sizes (Grade 40)	5,626.08	kgs.	P _____	P _____
10	Section VII	6. Concrete Structures, Class A, 211 kg/cm <sup>2</sup>	83.50	cu. m.	P _____	P _____

The undersigned bidder hereby certifies that he has fully informed himself of all conditions, local and otherwise affecting the carrying out of the Contract Works and that his bid has been prepared in strict accordance with the terms and conditions of these Bid Documents.

Name of Firm: \_\_\_\_\_

Name in Print &amp; Signature of Bidder \_\_\_\_\_



**BILL OF QUANTITIES AND BID PRICES**  
**SMALL RESERVOIR IRRIGATION PROJECT**  
**Construction of Calapangan Earthfill Dam and its Appurtenant Structures in Region 2**  
**Santo Niño, Cagayan**  
**Invitation to Bid No. R2-CSRIPD-C-38**

ITEM NO.	SECTION	DESCRIPTION	QTY.	UNIT	UNIT BID PRICE IN WORDS & IN FIGURES	TOTAL
11	Section VI	<b>E. DAM AREA</b> 7. Gravel Bedding	13.12	cu. m.	P_____	P_____
12	Section XVIII	8. Metal Beam Rail x 3m (AASHTO M180)	522.00	l.m.	P_____	P_____
13	Section XVII	9. Dam Instrumentation a. Standpipe Piezometer ( Furnish and Installation of 19 sets ) a.1. Plain PVC Tube, 3" dia. a.2. Perforated PVC Tube, 3" dia. a.3. Top caps, Bottom caps and Couplings a.4. Water Level Indicator, 50 meters a.5. Bentonite Pellets, 25 kg. /bag b. Drilling (Non-Core)	1.00	L.S.	P_____	P_____
		c. Surface Measuring Point	334.75	l.m.	P_____	P_____
		d. Bench Mark	19.00	unit	P_____	P_____
		e. Inclined Staff Gauge	16.00	unit	P_____	P_____
		f. Seepage Measuring Weir (Class A, 211 kg/cm <sup>2</sup> ) including V-notch weir, perforated pipe and elevation markings	1.00	L.S.	P_____	P_____
14	Section XXIV	10. Crest Surfacing a. Sub-base Course	209.98	cu. m.	P_____	P_____
		b. Base Course	600.00	cu. m.	P_____	P_____
15	Section XXVIII	11. Miscellaneous Metal Works and Materials a. Stairs with Components and all accessories to complete the works	1.00	L.S.	P_____	P_____
		<b>SUB-TOTAL E</b>			P_____	P_____

The undersigned bidder hereby certifies that he has fully informed himself of all conditions, local and otherwise affecting the carrying out of the Contract Works and that his bid has been prepared in strict accordance with the terms and conditions of these Bid Documents.

Name of Firm: \_\_\_\_\_

Name in Print &amp; Signature of Bidder \_\_\_\_\_

**BILL OF QUANTITIES AND BID PRICES**  
**SMALL RESERVOIR IRRIGATION PROJECT**  
**Construction of Calapangan Earthfill Dam and its Appurtenant Structures in Region 2**  
**Santo Niño, Cagayan**  
**Invitation to Bid No. R2-CSRIPD-C-38**

ITEM NO.	SECTION	DESCRIPTION	QTY.	UNIT	UNIT BID PRICE IN WORDS & IN FIGURES	TOTAL
		<b>F. SPILLWAY AREA</b>				
16	Section IV	1. Excavation and Foundation Preparation				
		a. Common	172,791.66	cu. m.	P	P
		b. Rock	131,770.32	cu. m.	P	P
17	Section IV-A	2. Overhaul/Disposal of Waste Materials (AHD = 3.50 kms)	182,357.05	cu. m.	P	P
18	Section V	3. Filling and Backfilling (from Common Excavation)	9,970.85	cu. m.	P	P
19	Section VII	4. Concrete Structures, Class A, 211 kg/cm <sup>2</sup>	4,547.53	cu. m.	P	P
20	Section IX	5. Reinforcing Steel Bars, all sizes (Grade 60)	316,818.24	kgs.	P	P
21	Section X	6. Concrete Joints and Joint Materials				
		a. PVC Waterstop (23cm. width, Dumbell Type with centerbulb width, 6mm thk.)	630.00	l.m.	P	P
		b. Joint Sealant	7.60	liters	P	P
		c. Preformed Bituminous Joint Filler, 20mm thk.	392.30	sq. m.	P	P
21	Section X	7. Dowel Bars (20 mm dia. x 0.80 m Plain Bar)	1,778.00	kgs.	P	P
23	Section XVI	8. Anchor Bars (25 mm dia. x 1.5m)	252.00	l.m.	P	P
24	Section XIV	9. Filter Drain (Sand and Gravel)	840.54	cu. m.	P	P
25	Section XII	10. Grouted Riprap	218.62	cu. m.	P	P
26	Section VI	11. Gravel Bedding	273.07	cu. m.	P	P
27	Section XI	12. Boulder Riprap	2,264.44	cu. m.	P	P

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**BILL OF QUANTITIES AND BID PRICES**  
**SMALL RESERVOIR IRRIGATION PROJECT**  
**Construction of Calapangan Earthfill Dam and its Appurtenant Structures in Region 2**  
**Santo Niño, Cagayan**  
**Invitation to Bid No. R2-CSRIDP-C-38**

ITEM NO.	SECTION	DESCRIPTION	QTY.	UNIT	UNIT BID PRICE IN WORDS & IN FIGURES	TOTAL
		<b>F. SPILLWAY AREA</b>				
28	Section XIII	13. Rubble Masonry	785.99	cu. m.	P_____	P_____
29	Section XXIII	14. Shotcrete (Sta. 0+080 to Sta. 0+020)	1,994.20	sq. m.	P_____	P_____
30	Section XVIII	15. Miscellaneous Metal Works and Materials				
		a. Perforated PVC Drain Pipe (100 mm dia.)	1,718.00	l.m.	P_____	P_____
		b. PVC Drain Pipe (50 mm dia.)	585.00	l.m.	P_____	P_____
		c. G.I. Pipe Railings (50 mm dia.)	220.80	l.m.	P_____	P_____
		d. Neoprene Bearing Pad (Hardness 60)	4.00	pcs	P_____	P_____
31	Section XVIII	16. Ladder Rung (25mm dia. plain bar)	99.52	kgs.	P_____	P_____
32	Section XVII	17. Spillway Instrumentation				
		a. Standpipe Piezometer (Furnish and Installation of 5 sets )	1.00	L.S.	P_____	P_____
		a.1. Plain PVC Tube, 3" dia.			P_____	P_____
		a.2. Perforated PVC Tube, 3" dia.			P_____	P_____
		a.3. Top caps, Bottom caps and Couplings			P_____	P_____
		a.4. Water Level Indicator, 50 meters			P_____	P_____
		a.5. Bentonite Pellets, 25 kg. /bag			P_____	P_____
		b. Surface Measuring Point	5.00	unit	P_____	P_____
		c. Elevation Markings	1.00	L.S.	P_____	P_____
		<b>SUB-TOTAL F</b>			P_____	P_____

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Name of Firm: \_\_\_\_\_

Name in Print & Signature of Bidder \_\_\_\_\_



**BILL OF QUANTITIES AND BID PRICES**  
**SMALL RESERVOIR IRRIGATION PROJECT**  
**Construction of Calapangan Earthfill Dam and its Appurtenant Structures in Region 2**  
**Santo Niño, Cagayan**  
**Invitation to Bid No. R2-CSRIDP-C-38**

ITEM NO.	SECTION	DESCRIPTION	QTY.	UNIT	UNIT BID PRICE IN WORDS & IN FIGURES	TOTAL
		<b>G. OUTLET WORKS</b>				
33	Section IV	1. Excavation and Foundation Preparation				
		a. Common	35,128.43	cu. m.	P_____	P_____
		b. Rock	4,973.75	cu. m.	P_____	P_____
34	Section IV-A	2. Overhaul/Disposal of Waste Materials (AHD=3.5 kms)	29,573.62	cu. m.	P_____	P_____
35	Section VIII	3. Lean Concrete, Class C, 70 kg/cm <sup>2</sup>	224.60	cu. m.	P_____	P_____
36	Section VII	4. Concrete Structures, Class A, 211 kg/cm <sup>2</sup>	2,700.83	cu. m.	P_____	P_____
37	Section VIII	5. Concrete Plug, Class A, 211 kg/cm <sup>2</sup> including Contact Grouting	75.10	cu. m.	P_____	P_____
38	Section IX	6. Reinforcing Steel Bars, all sizes (Grade 60)	224,878.00	kgs.	P_____	P_____
39	Section X	7. Concrete Joints and Joint Materials				
		a. PVC Waterstop Ribbed Flat type (23cm. Width x 9.5mm thk.)	1,568.30	l.m.	P_____	P_____
		b. Joint Sealant	7.00	liters	P_____	P_____
40	Section XIX	8. Hydro-Mechanical Works				
		a. Gate Valve and Butterfly Valve				
		a.1. Gate valve, PN10, DN1200, w/ Intelligent Actuator with rising stem and bypass	1.00	assy.	P_____	P_____
		a.2. Butterfly valve, PN10, DN1200, w/ Intelligent type Actuator	2.00	assy.	P_____	P_____

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Name of Firm: \_\_\_\_\_

Name in Print & Signature of Bidder \_\_\_\_\_

**BILL OF QUANTITIES AND BID PRICES**  
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**Santo Niño, Cagayan**  
**Invitation to Bid No. R2-CSRIDP-C-38**

ITEM NO.	SECTION	DESCRIPTION	QTY.	UNIT	UNIT BID PRICE IN WORDS & IN FIGURES	TOTAL
		<b>G. OUTLET WORKS</b>				
	Section XVIII	a.3) Dresser Coupling, d=1200mm	3.00	assy.	P	P
	Section XX	b. Fabrication, Supply, Delivery and Installation of Steel Pipe, Wye, Elbow, Reducer Pipe, Flanges and Steel Plate and all accessories to complete the works including Non Destructive Testing	1.00	L.S.	P	P
41	Section XVIII	9. Miscellaneous Metalworks and Materials				
		a. Trashrack (1.25m x 3.20m)	4.00	assy.	P	P
		b. Access Platform including all steel works, accessories and painting	1.00	L.S.	P	P
		c. Outlet Steel Gate with Accessories	1.00	L.S.	P	P
		d. Valve House with Accessories	1.00	L.S.	P	P
		d.1. Industrial Steel Door with Steel Jambs with Louver w/ Steel Handle Industrial Type d.2. CHB 150mm thk. Plastered both Side d.3. 100x50x1mm Tubular d.4. Louver Blades 650cmx10cmx10cm (1.0mm-2mm thk.) d.5. PVC Pipe 50mm dia.x3m d.6. PVC Pipe 50mm dia.elbow 90 d.7. Stainless Floor Drain 100x100mm				

The undersigned bidder hereby certifies that he has fully informed himself of all conditions, local and otherwise affecting the carrying out of the Contract Works and that his bid has been prepared in strict accordance with the terms and conditions of these Bid Documents.

Name of Firm: \_\_\_\_\_

\_\_\_\_\_  
Name in Print & Signature of Bidder



**BILL OF QUANTITIES AND BID PRICES**  
**SMALL RESERVOIR IRRIGATION PROJECT**  
**Construction of Calapangan Earthfill Dam and its Appurtenant Structures in Region 2**  
**Santo Niño, Cagayan**  
**Invitation to Bid No. R2-CSRIDP-C-38**

ITEM NO.	SECTION	DESCRIPTION	QTY.	UNIT	UNIT BID PRICE IN WORDS & IN FIGURES	TOTAL
		e. Steel Plate, 6mm thk., including anchor bolts	1.00	L.S.	P _____	P _____
		f. Elevation Markings	1.00	L.S.	P _____	P _____
		<b>SUB-TOTAL G</b>			P _____	P _____
		<b>H. RESERVOIR AREA CLEARING</b>				
42	Section II-A	1. Felling and bucking of Trees a. 15 cm & bigger DBH	208.00	trees	P _____	P _____
43	Section II-A	2. Skidding (AHD = 100 meters) a. 15 cm & bigger DBH	208.00	trees	P _____	P _____
44	Section II-A	3. Loading, hauling, Unloading, and Stacking (AHD=10kms) a. 15 cm & bigger DBH	208.00	trees	P _____	P _____
		<b>SUB-TOTAL H</b>			P _____	P _____
		<b>(Sub-Total A+B+C+D+E+F+G+H)</b> <b>TOTAL AMOUNT OF BID</b> <b>In Words and Figures</b>			P _____	P _____

The undersigned bidder hereby certifies that he has fully informed himself of all conditions, local and otherwise affecting the carrying out of the Contract Works and that his bid has been prepared in strict accordance

Name of Firm: \_\_\_\_\_

\_\_\_\_\_  
Name in Print & Signature of Bidder



Affiant

**SUBSCRIBED AND SWORN** to before me this \_\_\_\_ day of *[month]* *[year]* at *[place of execution]*, Philippines. Affiant/s is/are personally known to me and was/were identified by me through competent evidence of identity as defined in the 2004 Rules on Notarial Practice (A.M. No. 02-8-13-SC). Affiant/s exhibited to me his/her *[insert type of government identification card used]*, with his/her photograph and signature appearing thereon, with no. \_\_\_\_\_.

Witness my hand and seal this \_\_\_\_ day of *[month]* *[year]*.

#### NAME OF NOTARY PUBLIC

Serial No. of Commission \_\_\_\_\_  
 Notary Public for \_\_\_\_\_ until \_\_\_\_\_  
 Roll of Attorneys No. \_\_\_\_\_  
 PTR No. \_\_, *[date issued]*, *[place issued]*  
 IBP No. \_\_, *[date issued]*, *[place issued]*  
 Doc. No. \_\_\_\_  
 Page No. \_\_\_\_  
 Book No. \_\_\_\_  
 Series of \_\_\_\_.

\* This form will not apply for WB funded projects.

#### OMNIBUS SWORN STATEMENT

Construction of Calapangan Earthfill Dam and its Appurtenant Structures in Region 2 under Small Reservoir Irrigation Project  
 ITB No. R2-CSRIPD-C-38

Affiant

**SUBSCRIBED AND SWORN** to before me this \_\_\_\_ day of *[month]* *[year]* at *[place of execution]*, Philippines. Affiant/s is/are personally known to me and was/were identified by me through competent evidence of identity as defined in the 2004 Rules on Notarial Practice (A.M. No. 02-8-13-SC). Affiant/s exhibited to me his/her *[insert type of government identification card used]*, with his/her photograph and signature appearing thereon, with no. \_\_\_\_\_.

Witness my hand and seal this \_\_\_\_ day of *[month]* *[year]*.

#### NAME OF NOTARY PUBLIC

Serial No. of Commission \_\_\_\_\_  
 Notary Public for \_\_\_\_\_ until \_\_\_\_\_  
 Roll of Attorneys No. \_\_\_\_\_  
 PTR No. \_\_, *[date issued]*, *[place issued]*  
 IBP No. \_\_, *[date issued]*, *[place issued]*  
 Doc. No. \_\_\_\_  
 Page No. \_\_\_\_  
 Book No. \_\_\_\_  
 Series of \_\_\_\_.

#### BID SECURING DECLARATION

Construction of Calapangan Earthfill Dam and its Appurtenant Structures in Region 2 under Small Reservoir Irrigation Project  
 ITB No. R2-CSRIPD-C-38





National Irrigation Administration

Contract Number: \_\_\_\_\_

Name of Contract: \_\_\_\_\_

**NFCC Computation**

- A. Summary of the Bidder's assets and liabilities on the basis of the latest Audited Financial Statements, stamped "RECEIVED" by the Bureau of Internal Revenue or BIR authorized collecting agent, for the immediately preceding year and a certified copy of Schedule of Fixed Assets particularly the list of construction equipment.

		YEAR
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 = [(15) (Current Assets – current liabilities)] 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 to be bid

NFCC = \_\_\_\_\_

Submitted by:

\_\_\_\_\_  
Name of Bidder

\_\_\_\_\_  
Signature of Authorized Representative

Date: \_\_\_\_\_

National Irrigation Administration

Contract Number: \_\_\_\_\_

Name of Contract: \_\_\_\_\_

List of Equipment, Owned or Leased and/or under Purchase Agreements, Pledged to the Proposed Contract

Business Name : \_\_\_\_\_  
Business Address : \_\_\_\_\_

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.							
iv.							
v.							
C. Under Purchase Agreements							
i.							
ii.							
iii.							
iv.							
v.							

This statement shall be supported with : (1) Proof of ownership, or Lease Contract, or Purchase Agreement, and  
(2) Certificate of availability of equipment from the equipment lessor/vendor for the duration of the contract

Submitted by : \_\_\_\_\_  
Designation : \_\_\_\_\_  
Date : \_\_\_\_\_  
(Printed Name & Signature)



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## SECTION VI

### DAM EMBANKMENT

#### 601 SCOPE

This Section covers construction of the zoned-earth fill type of embankment dam consisting of compacted impervious clay core zone, upstream and downstream random fill zone, rock toe zone, filter and drain zone, boulder or rock riprap with gravel blanket for upstream protection zone and gravel ballast or grass sodding for the downstream protection zone.

#### 602 GENERAL REQUIREMENTS

The dam embankment comprises of a central impervious clay core with compacted random fill zones, filter/drain zone, upstream and downstream slope protections and rock toe zone.

The position of the clay core, chimney and blanket filters/drains, random fill, rock fill and other embankment materials are designated with corresponding zone numbers shown on the Drawings.

The dam embankment shall be constructed to the lines and grades as shown on the Drawings or as established by the Engineer. The lines and grades so established may be changed during construction by the Engineer, and such revision which may cause change in quantity shall not constitute justification for changes in unit prices.

In this specification, the terms "Optimum Moisture Content" and "Maximum Dry Density at Lower Compactive Effort: are abbreviated hereafter as "optimum" and "standard density", respectively.

The moisture contents and dry densities specified herein are considered the most suitable for achieving the desired compaction, impermeability and strength of core. The Engineer, however, reserves the right to alter specified moisture contents according to the results obtained during construction. No additional payment shall be made if specified moisture contents are altered by the Engineer.

#### 603 SOURCES OF FILL MATERIALS

The Contractor shall obtain all fill materials necessary for construction of the embankment, from within the boundaries of the borrow areas, quarries and other source areas designated by the Engineer or as shown in the Drawings.

The boundary location shown in the Drawings are approximate. The Contractor shall, if and when so requested by NIA, stake, flag or otherwise mark in

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Dam Embankment

the field, the lines defining boundaries of the borrow areas, quarries and other source areas.

In case of deficiency in embankment materials from the NIA designated borrow sources, the Contractor shall notify NIA, in writing, in order for NIA to carry out an assessment of new borrow area/s including the tests required or the Contractor may propose an alternative borrow source/s with corresponding test requirements and subject for approval by NIA.

NIA will assist the Contractor in the right-of-way negotiations of the new borrow area/s and payment shall be made in accordance with the provision of Bid Documents: Section V-A, Local Conditions, LC-04 and LC-13 respectively.

#### 604 TEST FILLS

The Contractor shall construct test fills of all zone fill materials prior to starting the placement of fill in the embankment. In addition, the Contractor shall, at the start of fill placement in U/S Protection and D/S Protection Sections of the embankment, conduct experimental placement operation on these section materials.

Initial test fills shall be constructed on the location which shall be identified by the Contractor with the approval of NIA. Construction of test fills shall be outside the limits of the dam embankment. The Contractor shall submit to NIA for approval his proposed location for the construction of test fill within 30 calendar days after the date of receipt of the Notice to Proceed (NTP). Construction of test fill including corresponding required material testing shall be started 60 calendar days after the receipt of NTP and shall be done prior to the Contractor's start of fill placement.

In case there are changes in the source of borrow materials during the construction of dam embankment, the Contractor shall conduct another test fills using the new borrow materials and shall be constructed within the ongoing construction of dam embankment. No additional payment will be made by NIA to the Contractor for the construction of test fills within the dam embankment for new borrow materials.

The Test Fill shall be of sufficient size to allow its performance to be as close as the actual project fill behavior. It shall have a width of 10m to 15m, and length of at least 6m to 10m longer than the width. Test fill on every zone material shall have minimum of 3 layers (lift) and a maximum loosed lift thickness shall be based on the trial lift to be conducted on the test field. The total volume for all test fill materials shall not exceed 1,500 m<sup>3</sup>.

The objectives of these test fills and experimental placement operations will be to check the suitability of the layer thicknesses, numbers of roller or other compacting equipment passes and the compaction optimum moisture contents. It is anticipated that this work will involve the placement of several different section materials, in different layer thicknesses, at different moisture contents, and in separate



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Dam Embankment

lanes for compaction by different frequencies, and numbers of passes. The Contractor shall construct all test fills, and conduct all other experimental placement operations and experimental determination of fill characteristics both in the field and in laboratory (e.g. Atterberg Limits Tests, gradation, field density test and permeability test), in strict accordance with directions which shall be given by NIA. Rework on the Test Fills shall be done until the result satisfies the required technical specifications and NIA.

The Contractor shall request, in writing, permission from NIA to test compacting equipment of sizes and types other than those specified in the Bid Documents specifically on Clause 10.5 of the Bid Data Sheet hereof on the test fills and experimental placement operations. However, it shall be clearly understood that such permission, if granted by NIA, is for the purpose of testing only, and that such testing of other equipment shall be entirely at the expense and risk of the Contractor.

#### **605 FOUNDATION PREPARATION AND TREATMENT**

No material shall be placed on any section of the foundations until the section has been suitably prepared and detailed geologic mapping of actual foundation level has been undertaken by the Contractor with supervision of NIA Geologist and has been approved by the NIA Engineer. All test pits or other cavities within the area shall be filled with compacted material and shall be considered as part of the embankment. The foundation shall be prepared so that the surface materials shall be well compacted and bounded with the first layer of fill as herein specified for the subsequent layers of the fill. Foundation treatment shall include moisture conditioning to the approval of the Engineer immediately prior to the first layer of fill being placed thereon.

Foundation in the core trench shall be prepared as detailed in this specification. Cavities, hollows and overhangs shall be filled with clay compacted to one hundred percent (100%) standard density as ordered by the Engineer. Fissures which may be revealed in the cut-off trench excavation shall be excavated out by means of open pits or shafts and backfilled with concrete. Fissured rock shall be covered by concrete or brushed with sand-cement slurry when ordered by the Engineer.

The foundation for the fill shall be prepared as specified in Section IV, Excavation and Foundation Preparation. The foundation treatment will include moisture conditioning and rolling as approved by the Engineer.

#### **606 MATERIALS AND METHOD OF CONSTRUCTION**

##### **1) Impervious Core**

Impervious Core materials shall be mainly obtained from borrow areas, as indicated in the plan or as directed by the Engineer.

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Dam Embankment

The Contractor shall excavate the clay during favorable weather conditions. The Contractor shall provide all measures necessary to dry cut the borrow area by drainage or prevent run-off from the surrounding ground entering it, and for protection of prepared material to prevent it from becoming wetter.

Prior to and during compaction, the impervious core materials shall have the moisture content as specified herein or as otherwise directed by the Engineer.

Material in the impervious core shall have a moisture content from 21.5% dry to 29.5% wet optimum unless otherwise specified by the Engineer.

To ensure uniformity in the embankment, every effort must be made to bring the material to the specified moisture content at the place of execution. If the material in-site is too dry, water shall be added by sprinkling or ponding well in advance of excavation. If the material in-site is too wet, remedial drainage ditches shall be made and the maximum surface of the borrow area shall be exposed to wind and sun for harrowing.

When it is necessary to bring the moisture content of the material up to the specified level after transport to the embankment, water shall be evenly sprinkled on the material and shall be mixed uniformly throughout the layer by harrowing or other effective means.

Whatever method is used for the initial conditioning of the material, the Contractor shall provide suitable means of applying further water to the material on the embankment to counter the evaporation losses, and increased water demand due to breaking down of the material due to handling. Reticulated water and sprays shall be available at all times on the embankment for construction purposes.

If due to any cause a layer on the embankment has water content greater than that specified, then it shall be harrowed and exposed to the sun before compaction, or alternatively, it shall be removed from the embankment. The Contractor shall bear the entire cost of harrowing, drying, and compaction of re-compaction material and for the removal of material which is too wet and for the substitution and compaction of material at the specified moisture content.

The required degree of control of moisture conditioning is such that the mean moisture content shall be within the tolerances specified or as otherwise directed by the Engineer and the standard deviation of test results shall not be greater than 1.5%.



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Dam Embankment

The distribution and gradation of the materials shall be such that the dam will be free from dense, pockets, streaks or layers of material differing substantially from the surrounding material.

The excavation and placing operation shall be such that the material when compacted will be blended sufficiently to secure the best distribution of the material, and for this purpose the Engineer may designate the locations on the embankment where individual loads shall be deposited.

Earthfill materials shall be placed on the embankment continuously, approximately in horizontal layers not more than fifteen (15) centimeters thick after compaction. If in the opinion of the Engineer the embankment is too dry or too smooth to bond properly with the layer to be placed thereon, it shall be moistened and/or worked with harrow, scarify or other suitable equipment, and to a sufficient depth to provide satisfactory bonding with the next layer to be placed.

The Contractor shall maintain cross-slopes on the embankment as approved by the Engineer so as to drain excess rainfall. Hauling equipment shall be so routed that its compactive effort is distributed uniformly over the embankment.

When the impervious core or compacted earth fill has been conditioned to the specified moisture content, it shall be compacted to ensure that the minimum density is at least 98% of standard density for the fraction of the material passing a No. 4 sieve as placed on the embankment as measured in the site laboratory.

The thickness of the layer which can be effectively compacted will depend on the compaction equipment employed during the conduct of test fills and/or will be determined by the Engineer. The thickness of layer after compaction will be fifteen (15) centimeters thickness.

The Engineer will establish from time to time the required number of passes of the compaction equipment from test results on the embankment itself as the work progresses.

No claim will be accepted on account of the number of passes designated by the Engineer giving higher densities than that specified.

In cavities, in areas adjacent to the abutments or where equipment clearances or the safety of structures does not permit compaction by normal methods, special care must be taken on the placing and compaction of the core.

The rock or concrete surface shall first be thoroughly cleaned and moistened with a fine mist of water. Core material of the more plastic type



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Dam Embankment

which is free from rock larger than twelve (12) millimeters maximum dimension shall be used. It shall have a moisture content determined by the Engineer and shall be compacted by rollers, mechanical tampers or other approved methods so that the specially compacted core shall have a dry density not less than that obtained in the remainder of the core after compaction.

The Engineer will designate the area and volume of the impervious core which requires special compaction, which compaction shall be affected to his satisfaction.

## 2) Sand and Gravel Filter

A well-graded sand and gravel filter bedding shall be placed on the prepared foundation below the riprap works for the upstream slope protection and rock toe. The drainage blanket shall consist of sand filter and gravel filter as specified in Paragraph 605.9. It shall be placed in layers in thickness specified on the drawings after compaction. Each layer shall be sluiced with water. The volume of water shall be at least half the volume of drain place. Each layer shall be compacted to the required compaction.

The Contractor may suggest methods of placing the drainage blanket to ease placement problems, but any system used shall be approved by the Engineer before use. Measurement will, however, only be made to the neat dimensions shown on the embankment cross-section of the drawings.

## 3) Random Fill

Random fill materials may consist of rock severely weathered to be used as random fill. It may contain earth which must be free of organic matter and variable amount of fresh rock but in no case shall the material contain blocks of stone which will not break down under the action of compaction machinery to individual pieces with a maximum cross-sectional dimension of fifteen (15) centimeters.

The random fill for the dam embankment, roadways and where required elsewhere shall be dumped and spread in horizontal layers having an uncompacted thickness of not over thirty (30) centimeters. When material is spread, chunks larger than fifteen (15) centimeters in size shall be broken down by approved means or removed manually or as directed by the Engineer.

After a layer of random fill has been dumped, crushed and spread to the specified thickness and brought to satisfactory moisture content, it shall be compacted by means of rollers or mechanical tampers to the desired compaction to be determined by the Engineer. No succeeding layer shall be placed until the previous layer has been tested and approved of its compaction by the Engineer.

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Moisture content of the random fill shall be the optimum practicable required for a compaction as determined by the Engineer and shall be uniform throughout each layer.

All necessary tests for random fill including moisture content, composition and compaction will be made continuously by the Engineer and from which corrections, adjustments and modifications of methods, materials and moisture content will be made in order to secure satisfactory density of the fill materials. The Contractor shall provide necessary skilled labor in obtaining and preserving samples.

**4) Rock Toe (Dumped Boulders)**

Rock toe materials shall consist of hard, dense and durable quarried rock or boulders place on well-prepared foundation as shown on the drawings. Rock toe materials shall have a diameter of not less than 7.50 cm (cobble size), Boulders and rock fragments reasonably graded up from 30cm to 60cm. A minimum specific gravity of 2.6 will be required for rock toe materials. The inclusion of earth, sand or rock dust in excess of five percent (5%) by volume shall not be permitted.

The materials need not be hand-placed, but shall be dumped and smoothed by moving rock or boulders into position in such a manner as to insure that the material when in place is stable and without tendency to slide, and so that there will be no unreasonable large unfilled spaces within the riprap. The inclusion of rock spalls or gravel in an amount to fill the voids in riprap, but not in excess of that amount, as determined by the Engineer will be required.

**5) Filters and Drains**

Filters and drains shall be placed at the chimney drain and horizontal drain or to the lines, grades and thicknesses shown on the Drawings or established by the Engineer. The lines, grades and thicknesses may be changed during construction by the NIA; such revisions shall not constitute justification for changes in the tendered unit prices.

The materials required for filters and drains shall be natural sand and gravel of suitable gradation, or materials produced by crushing and screening processes from required excavations, quarries, sand banks or borrow pits as approved by the Engineer. Representative samples of filter and drain material shall be submitted by the Contractor for the approval of the Engineer. Screening, blending and washing of the filter and drain materials may be required so that they conform in these specifications.

The filters and drains shall meet the following filter criteria:



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- a)  $\frac{D_{15} \text{ of the filter}}{D_{15} \text{ of base material}} \geq 5$  ,  
provided that the filter does not contain more than 5% of material finer than 0.074mm (No. 200 sieve) after compaction
- b)  $\frac{D_{15} \text{ of the filter}}{D_{85} \text{ of base material}} \leq 5$
- c)  $\frac{D_{15} \text{ of the filter}}{\text{Maximum opening of pipe drain}} \geq 2$
- d) Generally, the filter should be uniformly graded to provide adequate permeability and prevent segregation during processing, handling and placing.

Note:

- $D_{15}$  is the size at which 15 percent of the total soil particles are smaller.
- $D_{85}$  is the size at which 85 percent of the total soil particles are smaller.
- If more than one filter layer is required, the same criteria are followed and the finer filter is considered as the base material for the selection of the gradation of the courser filter.

The filters and drains shall be placed in layers not greater than five hundred (500) millimeters thick after compaction. They shall be sluiced with clean water the volume of which shall be at least half the volume of filter placed.

After sluicing, compaction shall be based from the determined number of passes by the required equipment from the test fills.

Care must be taken to prevent any material which would interfere with the free-draining properties of the filter and drains from entering therein. Prior to placing the coarse filter on the rock fill, suitable rock fragments shall be packed by hand into all large voids or cavities on the face of the rock fill, to the satisfaction of the Engineer.

#### 6) Rock fill/Boulder Riprap

It shall conform to Item Section XI, Boulder Riprap.

#### 7) Sand Bedding and Gravel Blanket

Sand bedding shall be placed between the gravel ballast and compacted random fill at the downstream portion of the dam. Gravel blanket shall be placed between the compacted random fill and boulder riprap at the upstream portion of the dam. The work under this paragraph shall include



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furnishing and placing the graded sand and gravel to the thickness indicated on the drawings or established by the Engineer.

Materials for the sand and gravel blanket shall meet all the requirements specified for fine and coarse aggregate for a two-inches (50.8mm) thick concrete. The sizes of coarse aggregate shall be from No. 4 sieve to two inches (50.8mm).

The materials shall be dumped above the compacted random fill and spread in layers having an uncompact thickness of not more than 25 centimeters. Each layer shall be compacted by required number of passes of the required equipment. The Contractor has the option to adopt a method of compacting the layers of materials approved by the Engineer.

#### **8) Down Stream Slope Protection (Gravel Ballast)**

Gravel ballast shall be placed above the random fill as surface slope protection at the downstream slope of the dam. The work under this paragraph shall include furnishing and placing the gravel to the thickness indicated on the drawing or established by the Engineer.

Materials for the gravel ballast shall be 12mm to 50mm in diameter with specific gravity of 2.60. It shall also conform to specifications of coarse aggregate specified in Section VII of Concrete.

The materials shall be spread above the sand bedding to the thickness required on the drawing. The Contractor may use any other option which is convenient for him unless approved by the Engineer.

### **607 LABORATORY TESTING AND MATERIALS CONTROL**

The Contractor shall comply with NIA's Guidelines on Material Testing and Quality Control, Memorandum Circular No. 186, Series 2020.

All necessary tests for moisture content, composition, classification, compaction, Plasticity Index, etc., will be arranged by the Engineer, and from these tests, corrections, adjustments and modifications of methods, materials and moisture content shall be made in order to secure satisfactory properties of the materials.

In case that the material to be used for embankment came from new borrow area not designated on the plan, the Contractor shall conduct additional tests such as shear strength, permeability test, tri-axial tests and consolidation tests. The shear strength translated to angle of internal friction and Cohesion that shall be derived by Direct shear or Tri-axial or any other method acceptable to the NIA should be included in the materials testing report. Tests in the borrow areas and on the fills will be arranged so

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as to cause the least possible inconvenience to the Contractor, but the Contractor shall have no claim for extra payment for any reason on account of this testing.

To ensure that the stability of dam embankment is not compromised, the Contractor shall prepare and submit to NIA for approval the Contractor's Materials Quantity, Quality and Testing Program and establish in the project site a material testing laboratory which shall contain apparatus such as but not limited to the following:

#### List of Laboratory Equipment Requirement:

##### 1. Particle Size Analysis:

Set of Sieves		Quantity	
a.)	3 inches (75 mm)	1	pc.
b.)	2 ½ inches (63.50 mm)	1	pc.
c.)	2 inches (50 mm)	1	pc.
d.)	1 ½ inches (37.50 mm)	1	pc.
e.)	1 inches (25 mm)	1	pc.
f.)	¾ inches (19 mm)	1	pc.
g.)	½ inches (12.50 mm)	1	pc.
h.)	⅜ inches (9.50 mm)	1	pc.
i.)	#4 (4.75 mm)	1	pc.
j.)	#8 (2.36mm)	1	pc.
k.)	#10 (2.00 mm)	1	pc.

Set of Sieves		Quantity	
l.)	#16 (1.18 mm)	1	pc.
m.)	#20 (850 µm)	1	pc.
n.)	#30 (600 µm)	1	pc.
o.)	#40 (425 µm)	1	pc.
p.)	#50 (300 µm)	1	pc.
q.)	#60 (250 µm)	1	pc.
r.)	#100 (150 µm)	1	pc.
s.)	#200 (75 µm)	1	pc.
t.)	Brass Pan	1	pc.
u.)	Brass Cover	1	pc.

##### 2. Liquid Limit Device (ASTM D – 423)

a.)	Standard Liquid Limit Device with ASTM Tool	1	unit
b.)	ASTM Grooving Tool	1	pc.
c.)	Porcelain Mixing Dish, 11.43cm Ø and 5.08cm deep	1	pc.
d.)	Graduated Cylinder (25ml)	1	pc.
e.)	Soil Mortar Porcelain (125mm Ø)	1	pc.
f.)	Spatula, Length=15.24cm, Width=1.90cm	1	pc.
g.)	Glass Plate	1	pc.

##### 3. Soil Compaction (Moisture Density Determination)

a.)	Modified Compaction Mold (Ø=152.40mm, Height = 116.43mm)	1	pc.
b.)	Modified Compaction Rammer w/ 51mm Ø circular face weighing (4.50kg.), w/ a height of drop of 30.48cm	1	pc.
c.)	Mixing Pan 24 inches x 24 inches (60.96cm x 60.96cm)	2	pc.
d.)	Straight Edge	1	pc.



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e.)	Paint Brush, 2 inches (50.8mm)	1	pc.
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## 4. Field Density Apparatus:

a.)	Sand Density Cone w/ Guide Plate	1	pc.
b.)	Plastic/Glass Jag for Sand Cone	1	pc.
c.)	Sand Soil Scop	1	pc.
d.)	Steel Chisel, 25mm Ø	1	pc.
e.)	1 Gallon Field Can	1	pc.
f.)	Ballpen Hammer	1	pc.

5. Oven, thermostatically controlled, capable of maintaining a temperature of  $110^{\circ}\text{C} \pm 5^{\circ}\text{C}$  (1 unit)

## 6. Balances

a.)	Heavy Duty Solution Balance w/ Counter Weight 20 kg. capacity	1	unit
b.)	Triple Beam Balance 311gram capacity	1	unit
c.)	1kg capacity Sensitive to 0.01gram/Electric Balance	1	unit

7. Speedy Moisture tester 50% MC Capacity - 1 unit
8. Concrete Cylinder Mold = 15cm Ø and 30cm height - 9 pcs.
9. Slump Cone with Base – 20.30cm base Ø and 10cm top Ø - 1 pc.
10. Tampering Rod 5/8 inches in diameter, hollow point - 1 pc.
11. Rubber Mallet - 1 pc.
12. Steel Brush, 1 inch - 1 pc.
13. Wire Basket (Density Basket), outside Ø=20.30cm, 20.30cm high - 1 pc.
14. Pycnometer - 1 pc.
15. Conical Mold, top Ø = 38mm, bottom Ø = 89mm, Minimum Height = 74mm - 1 pc.
16. Wash Bottle (1000ml) - 1 pc.
17. Unit Weight (Yield Bucket) - 1 pc.
18. Splitter Device - 1 pc.
19. Sample Pan, Stainless Steel, 9 1/2" x 5 1/4" x 2 1/4" (24.13mmx13.34mmx5.72mm) - 3 pcs.
20. Hydrometer (Soil) - 1 pc.
21. Hydrometer Cylinder Jar (Graduated to 1130 and 1205 ml @ 20°C) - 2 pcs.
22. Digital Stopwatch - 1 pc.



In addition to the usual embankment materials tests being undertaken, other tests as specified below shall be included only for materials that came from new borrow areas or borrow areas not designated in the plans. Compacted embankment material samples shall be obtained and tested in accordance with the following ASTM standard methods:

### 1. Random Fill Materials

TYPE OF TEST	REQUIREMENTS
A) Permeability Test Constant Head (Coefficient of Permeability)	ASTM D2434
B) Tri-axial Test for Shear Strength (Angle of Internal friction and Cohesion)	
a) Unconsolidated Undrained (UU)	ASTM D2850
b) Consolidated Undrained (CU)	ASTM D4767
c) Consolidated Drained (CD)	ASTM D7181

### 2. Impervious Core Materials

TYPE OF TEST	REQUIREMENTS
A) Permeability Test Constant and Falling Head (Coefficient of Permeability)	ASTM D5084
B) Consolidation Test	ASTM D2435
Tri-axial Test for Shear Strength (Angle of Internal friction and Cohesion)	
a) Unconsolidated Undrained (UU)	ASTM D2850
b) Consolidated Undrained (CU)	ASTM D4767
c) Consolidated Drained (CD)	ASTM D7181

Permeability, tri-axial and consolidation tests should be done in undisturbed samples such as thin wall tube, piston or block samples (ASTM D 4220). One set tests must be done in embankment materials for both random fill and impervious core zones. Unbiased samples must be obtained in areas as directed by the NIA Engineer.

The results of the above-mentioned activities must be included in the materials testing reports of dam foundation and embankment.

## 608 TOLERANCE FOR EARTHWORKS

Where tolerances are not stated in the specifications or drawings for any part of the works, permissible deviations will be interpreted in conformity with the following:

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- a) Rejected work will be remedied or removed and replaced by the contractor at his own expense.
- b) Tolerances in embankment's gradual variations of outline and zones from those shown on drawings or as specified shall be within plus or minus three hundred (300) millimeters.
- c) Tolerances over and above that defined above for protulence or shyness of individual rock fragments in placed backfill shall be within plus or minus three hundred (300) millimeters.
- d) Thickness of fine or coarse filter normal to slope shall be within plus or minus one hundred fifty (150) millimeters.

## 609 **METHOD OF MEASUREMENT**

All costs entailed in the construction, completion of the dam including the construction of test fills in accordance to these specifications shall be deemed to be included in the unit bid prices as reflected in the Contractor's Bid Proposal.

### 1) **Foundation Preparation and Treatment**

Cost involved in the preparation and treatment of foundations will be deemed to be covered in the corresponding unit prices for excavation, as classified in the Bill of Quantities, the method of measurement and payment for which is discussed in Section IV, Excavation and Foundation Preparation.

### 2) **Impervious Core and Compacted Fill**

Measurement for payment for earth fill in the dam will be made to the neat lines and grades as shown in the Drawings or as directed by the Engineer. Basis of payment shall be the unit bid price per cubic meter which includes all costs involved in mixing, moistening, and conditioning the materials, excavation, treatment, placing and compacting the earth fill material.

### 3) **Sand and Gravel Blanket**

Measurement of the actual volume placed as accepted by the Engineer, shall be the basis of payments. The unit price for this item as reflected in the Bid Proposal of the Contractor shall be applied on said actual measurements in determining the payments to be made. Such payments shall include all costs of washing, processing and placing the material.



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**4) Random Fills**

Measurement for payment for random fills will be based on the number of cubic meters of fill materials in place and accepted between the foundation lines, as determined on the basis of a survey made after completion of excavation and foundation preparation, and the lines, grades and slopes shown on the Drawings. Volume shall be computed by the Average End-Area Method.

**5) Sand and Gravel Filter**

Measurement and payment for sand and gravel filter will be based on paragraph 1404 and paragraph 1405 of Section XVII, Filter Drain.

**6) Rock Toe (Dumped Boulder)**

Shall be properly laid or dump in place with voids inserted with spalls to form as part of embankment.

**7) Rockfill/Boulder Riprap**

Measurement and payment for rock fill or boulder riprap will be based on paragraph 1104 and paragraph 1105 of Section XI, Boulder Riprap.

**8) Gravel Ballast**

Measurement and payment for gravel ballast will be based on the number of cubic meter placed and accepted.

**9) Laboratory Testing and Materials Quality Control**

All costs to be incurred in laboratory testing and materials control shall be at the expense of the Contractor.

**10) Tolerances for Earthworks**

Measurements for payment will be made to the neat lines and dimensions shown in the Drawings or established by the Engineer. The Contractor shall avoid using the tolerances as specified in paragraph 606, Tolerances for Earthworks, for the purpose of unduly increasing the quantity of materials above the actual measurements.

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Measurement and payment for gravel ballast will be based on the number of cubic meter placed and accepted.

9) Laboratory Testing and Materials Quality Control

All costs to be incurred in laboratory testing and materials control shall be at the expense of the Contractor.

10) Tolerances for Earthworks

Measurements for payment will be made to the neat lines and dimensions shown in the Drawings or established by the Engineer. The Contractor shall avoid using the tolerances as specified in paragraph 606, Tolerances for Earthworks, for the purpose of unduly increasing the quantity of materials above the actual measurements.

610 BASIS OF PAYMENT

The volume measured shall be paid at the contract unit price per cubic meter for the different classes of dam embankment, which price and payment shall constitute full compensation for furnishing all materials, supplies, labor, equipment, tools and all incidentals necessary for the successful completion of the work described under this Section.



accordance with these specifications. All costs of installation replacement including any additional drilling made necessary by the replacement shall be at the expense of the Contractor. If the piezometer and standpipe are undamaged and unobstructed, acceptance of the installation shall be made.

#### **D. Basis of Payment**

Furnishing and installation of the dam and spillway instrumentation shall be paid separately as follows:

##### **A. Furnishing**

Fifty percent (50%) of the fixed lump sum cost which shall include furnishing, delivery and testing of the different dam instrumentation/items, shall be paid upon delivery to the project site in accordance with these technical specifications acceptable to the Engineer.

All dam instrumentation/materials delivered and accepted by the Engineer, shall be kept by the Contractor and will be responsible for any loss or damage of the instruments/materials until they are installed. Any loss or damage to the instruments/materials shall be replaced by the Contractor at his own expense.

##### **B. Installation Cost**

Forty percent (40%) of the fixed lump sum cost of the installation works which shall include labor, materials, subsidiary works and other incidentals required for the successful completion of the works shall be paid upon complete installation of the respective dam instrumentation/materials all in accordance with the drawings and accepted by the Engineer.

The remaining ten percent (10%) of the fixed lump sum cost of the installation cost shall be paid upon final acceptance by the Engineer of the Contract Works.

#### **2. Surface Measurement Points/Deflection Points, Bench Marks and other survey monuments**

##### **A. Materials**

###### **i. Bars**



Republic of the Philippines  
DEPARTMENT OF AGRICULTURE  
**National Irrigation administration**  
Central Office

**BIDS AND AWARDS COMMITTEE-A (BAC-A)**

MINUTES OF THE MEETING

**PRE-BIDDING CONFERENCE**

January 5, 2024; 02:00 PM  
BAC-A Conference Room, 6<sup>th</sup> Floor, NIA Bldg. A  
EDSA, Diliman, Quezon City

**Construction of Calapangan Earthfill Dam and its Appurtenant Structures in Region 2  
Under Small Reservoir Irrigation Project**  
Invitation to Bid No. R2-CSRIPD-C-38

ABC: PhP 750,947,887.40

**I. ATTENDANCE**

ROBERT C. SUGUITAN	-	Chairperson, BAC-A
ALBINE DAVE V. JUBILADO	-	Vice-Chairperson, BAC-A
REYNE B. UGAY	-	Member, BAC-A
RIZZA A. IBANEZ	-	Member, BAC-A
RAYMUNDO B. APIL	-	Provisional Member, BAC-A
EUSEBIO S. VILLAMANTO	-	Member, BAC-A
ORLANDO R. ESPEJO	-	Member, TWG
ARNOLD L. SALAZAR	-	Member, TWG
MARK EDWARD L. AVILA	-	Member, TWG
FEDERICO B. ORDINARIO	-	Representative, Region II
MARCELO D. LAGAYAN	-	Representative, Region II
EDGAR CATULIN JR.	-	Representative, Region II
ELMER A. CABULISAN	-	Representative, CPSS- CMD/ED

**OBSERVERS:**

PEPITO L. PADILLA	-	NIA-IAS, Representative
RALYNNE E. CORNILLEZ	-	COA. Representative
GLENN DEXTER LAURENTE	-	NIAEASP, Representative

Prospective Bidders	Representative/s
PRIME GIGA	MEROPE BAUTISTA
R.D. INTERIOR JUNIOR CONSTRUCTION	P. MABBORANO OFFELIA C. LUNNAY ELLEN ALOBOG



OCTAGON CONCRETE SOLUTIONS INC.	MA. ANGELICA BITES
LORENZO CONSTRUCTION & DEV'T. CORP.	ANNALIZA A. GARCIA
AVB MECH. & ELECTRICAL. ENGR. SVS.	JOEL ABARACOSO
KYRO BUILDERS, INC.	KENT NATIVIDAD
TRYST BUILDERS	REY MICUA DOMINGO GUANLAO, JR.
PERRC CONS. & DEV'T. CORP/APD GEN. CONSTRUCTION (JV)	ALEXANDER M. DIAZ
SUPERIOR BT. INC.	MARVEN ALDEA
CHINA CAMC ENGINEERING CO. LTD.	GERALD SARZONA LI XUANYU
LAP GLOBAL	LORY LOPEZ PANFILO CHIUTENA HIPOLITO T BRYAN
PHESCO INC.	GERMAIN P. SIAZON ROGER PABUSTA KRISTINE DE LEON
SSEI	JOSPEH ORIDO

## II. CONFIRMATION OF QUORUM

The BAC Secretariat acknowledged the presence of the following BAC-A members: (1) Senior Deputy Administrator Robert C. Suguitan; (2) Mr. Albine Dave V. Jubilado, CPA (3) Atty. Rizza A. Ibañez; (4) Engr. Eusebio V. Villamanto (5) Engr. Reyne B. Ugay and (6) Engr. Raymundo B. Apil. With majority of the members present, the BAC Secretariat confirmed the presence of a quorum.

## III. CALL TO ORDER

Having a quorum, the Pre-Bidding Conference for the above-mentioned proposed contract was called to order at 2:05 P.M. by the Chairperson, Engr. Robert C. Suguitan.

## IV. BUSINESS MATTERS

The Chairperson welcomed and acknowledged the presence of the BAC-A members, the members of the Technical Working Group, and the BAC Secretariat and informed the body that the meeting was regarding the *Pre- Bidding Conference for the Construction of Calapangan Earthfill Dam and Its Appurtenant Structures in Region 2 Under Small Reservoir Irrigation Project*. He then instructed the Secretariat to discuss the agenda of the meeting.

- Engr. Mark Edward L. Avila of the NIA CMD-ED presented the overview of the project:
  - a. Project Profile;
  - b. Approved Feasibility Study;
  - c. Approved Program of Work (POW);
  - d. Project General Layout;

- d. Site Development Plan;
- e. Scope of Works;
- f. Local Conditions;
- g. Project Location and Access to the Site

- Engr. Zosimo R. Baira of the BAC- Secretariat presented the slides for the meeting, the latter discussed the following:

**A. Background:**

Source of Fund	-	CBI (GAA 2024 -2027) (Fund 501)
Invitation to Bid No.	-	R2-CSRIPD-C-38
Contract Description	-	Construction of Calapangan Earthfill Dam and Its Appurtenant Structures in Region 2 Under Small Reservoir Irrigation Project
Approved Budget of the Contract (ABC)	-	PhP 750,947,887.40
Contract Duration	-	1,200 calendar days (inclusive of 326 unworkable days)

**B. Procurement Schedule:**

Issuance of Bidding Documents	From December 27, 2023 to January 18, 2024
Deadline for the Submission of the Bids	<b>On or before 12:00 NN of January 18, 2024</b>
Venue	Office of the BAC-A Secretariat 6 <sup>th</sup> Floor, NIA Building A EDSA, Diliman, Quezon City
Opening of Bids	<b>January 18, 2024 at 2:00 P.M.</b>
Venue	BAC-A Conference Room 6 <sup>th</sup> Floor, NIA Building A NIA Complex, EDSA Diliman, Quezon City

**For Envelope 1 –**

Class "A" Documents

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



### Technical Documents:

Statement of All its ongoing government and private contracts, including contracts awarded but not yet started, if any, whether similar or not similar in nature and complexity to the contract to be bid; and

Statement of the Bidder's Single Largest Completed Contract (SLCC) similar to the contract to be bid, in accordance with ITB Clause 5.3.

The Bidder must have completed a single contract that is similar to this Project, equivalent to at least fifty percent (50%) of the ABC adjusted, if necessary, to current prices using the PSA's CPI.

Contracts similar to the Project refer to: Construction of Dam/Embankment Dam (for agricultural and/or hydropower projects) and/or Flood Control Projects (Protection Dikes and/or Sabo Dam and/or Floodway) and/or Irrigation Canal/Canal Structures, and/or other Major Hydraulic Structures and/or Drainage Canals/Structures for Irrigation.

Special PCAB LICENSE in case of Joint Ventures and registration for the type and cost of the contract to be bid

All prospective bidders should possess a valid PCAB license with a Principal Classification and Category in General Engineering as "AAA and Registration Particulars with respective size range of "Large B" in Dam, Reservoir or Tunneling, and/or Irrigation or Flood Control.

Bid Security - The bid security shall be limited to Bid Securing Declaration or any one (1) other form in accordance with the following amount:

Form of Bid Security	Amount of Bid Security (Not less than the Percentage of the ABC)
Cash or cashier's/manager's check Bank draft/guarantee or irrevocable letter of credit issued by a Universal or Commercial Bank; or	Two percent (2%) = PhP15,018,957.75
Surety bond callable upon demand issued by a surety or insurance company duly certified by the Insurance Commission as authorized to issue such security.	Five percent (5%) = PhP37,547,394.37

Duly signed and notarized Sworn statement in accordance with Section 25.3 of the IRR of RA 9184 and using the form prescribed in Section VIII-A. Bidding Forms - Omnibus Sworn Statement, and if applicable, Original Notarized Secretary's Certificate in case of a corporation, partnership, or cooperative; or Original Special Power of Attorney of all members of the joint venture giving full power and authority to its officer to sign the OSS and do acts to represent the Bidder.

Certificate of Site Inspection signed by the designated NIA employee/ official (Engr. Raymundo B. Apil, Regional Manager)

**Contact Persons:**

Engr. Rommel Lingan  
Contact No. 0977-047-3000

Engr. David Jhun Fernandez  
Contact No. 0916-312-4453

**For Envelope 2-**

Financial Component:

Duly signed and accomplished Financial Bid Form; and

Other documentary requirements under RA No. 9184:

1. Duly signed Bid Prices in the Bill of Quantities;
2. Duly accomplished Detailed Estimates Form, including a summary sheet indicating the unit prices of construction materials, labor rates, and equipment rentals used in coming up with the Bid; and
3. Cash Flow by Quarter.

REMINDERS

No replacement of committed equipment/personnel shall be allowed by NIA until after fifty percent (50%) of the project has been completed, except for justifiable reason to be approved by NIA Regional Office 2.

For the submission of bids, Original, copies 1 and 2 of the first and second component of the bid must reflect the following:

Table of contents;

Sequential order of documents in line with Section VIII "Checklist of Technical and Financial Documents"

Proper tabbing and binding of documents; and

Copies 1 and 2 must be certified true copy of the original document.

Use the NIA Prescribed Forms attached in the Bidding Documents. Electronic copy of said Forms are readily available upon purchase of Bidding Documents at the Office of the BAC-A Secretariat, 6th Floor, NIA Bldg. A, Diliman, Quezon City.

Make sure that all documents that need to be notarized are properly filled-up as required notarized and accordingly.



Indicate the official address, contact numbers, and e-mail address in your Letter of Intent.

Written requests and/or clarifications may be submitted until January 8, 2024.

Supplemental Bid Bulletin/s will be posted on/before January 11, 2024.

#### **IV. PROSPECTIVE BIDDERS' INQUIRIES/CLARIFICATIONS**

##### **RD INTERIOR CONSTRUCTION**

The Representative from the RD INTERIOR CONSTRUCTION queried as to the number of equipment required as reflected in the bidding documents is not in proportion to what is needed in the project.

TWG Member, Engr. Mark Edward L. Avila replied that a supplemental bid bulletin will be issued in the soonest possible time to address the issue.

##### **CHINA CAMC ENGINEERING CO. LTD.**

Mr. Gerald Sarzona inquired as to the required Performance Bond. Engr. Zosimo R. Baira of the BAC-A Secretariat replied that the same is 30% in the ordinary course of business.

##### **TRYST BUILDERS**

The representative requested information as to how are they going to fill the Summary of Detailed Estimates form. The committee replied that the form must be filled up per item.

##### **SUPERIOR BT INC.**

The representative inquired as to the date and format of Certificate of Inspection. Head, Secretariat Engr. Marcelino M. Lim replied that the certificate will be issued by NIA Region 2 Office and there is no specific format. He also added that the inspection can be conducted after the pre-bidding conference at the discretion of the interested parties after coordinating with the designated contact persons.

##### **SSEI**

The representative inquired as to the signatory of the Certificate of Site Inspection. The Chairperson replied that the same should be signed by RM Engr. B. Apil otherwise it will be invalid and in case he is not available Engr. Apil must designate someone in his behalf but should inform the BAC-A.

#### **ADDITIONAL REMINDERS/STATEMENTS FROM MEMBERS OF THE BAC & SECRETARIAT**

- Vice-Chairperson Alvin Dave B. Jubilado informed the Secretariat that the date of the Bid Opening might coincide with the scheduled Manager's Conference. The Secretariat replied that a Supplemental Bid Bulletin will be issued for that matter.

- The Chairperson assured the prospective bidders that the budget for the project is secured and guaranteed by the NIA Board through the issuance of the Certificate of Budget Inclusion (CBI).
- The Chairperson informed the prospective bidders that the hauling distances as seen on the drawings and plans were used to compute the average costs.

He likewise added, that expenses for the fuel, oil and the driver for the required brand-new service vehicle that will be provided by the winning bidder will be at the expense of NIA.

- BAC Member, Engr. Eusebio S. Villamanto also reminded the prospective bidders to ensure that their PCAB Licenses, Mayor's Permit, and other documents of similar import are up to date or instead attach proofs that said documents has pending applications for renewal, also to check other attachments.
- BAC Member, Atty. Rizza A. Ibañez reminded that only government issued Identification Documents with photos and signatures are accepted for purposes of filling up the Jurat. The Vice-Chairperson also added that the required SPA or Secretary's Certificate in case of Joint Ventures must be executed by the parties to the JV. He also added that the Omnibus Sworn Statement, particularly the Affiant portion, must be properly signed.
- The Chairperson also reminded the prospective bidders to be mindful of the Supplemental Bid Bulletins that will be issued.

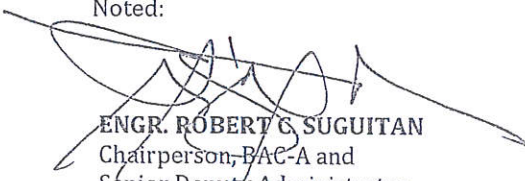
## V. ADJOURNMENT

Having no other matters for discussion, Chairperson, Robert C. Suguitan adjourned the meeting at 03:30 P.M.

Prepared by:

  
GERARD E. GUZMAN  
Member, BAC-A Secretariat

Noted:

  
ENGR. ROBERT C. SUGUITAN  
Chairperson, BAC-A and  
Senior Deputy Administrator